

GENERAL POST OFFICE

Handbook

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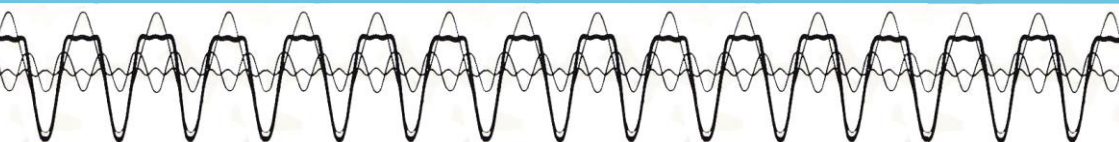
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10 mA
100 mA
1 A
10 A

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GENERAL POST OFFICE

Handbook for Radio Operators

*Working installations Licensed by Her
Majesty's Postmaster General*

Rg.67
1961 Edition

*Updated as per Appendix 9 released 1965
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Copy of Appendix 9 required for full detail*

LONDON
HER MAJESTY'S STATIONERY OFFICE
1961 : Reprinted 1962

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Foreword

This handbook is intended for the guidance of radio operators in ship and coast stations operating radio equipment on frequencies in the international maritime mobile bands. It is made up of the following seven chapters:

- Chapter I General Regulations and Conditions to be Observed by Stations of the Maritime Mobile Service.
- Chapter II Radiotelegrams and Radiotelephone Calls.
- Chapter III Procedures in the Maritime Mobile Radiotelegraph Service.
- Chapter IV Distress, Urgency, Safety and Medical Communications by Radiotelegraphy.
- Chapter V Procedures in the Maritime Mobile Radiotelephone Service.
- Chapter VI Distress, Urgency, Safety and Medical Communications by Radiotelephony.
- Chapter VII Radionavigational Services.

The handbook is based on the provisions of the Radio Regulations and Additional Radio Regulations annexed to the International Telecommunication Convention, Geneva, 1959; the Merchant Shipping (Radio) Rules, 1952; the Merchant Shipping (Direction-Finders) Rules, 1952, and the Wireless Telegraphy Act 1949, as well as on certain other statutory provisions.

Strict observance of the provisions and procedures covered by this handbook is essential for the efficient exchange of communications in the maritime mobile service, particularly when the safety of life is concerned. Special attention should be given to those sections dealing with distress, urgency and safety.

Throughout this handbook any reference to the United Kingdom also includes the Isle of Man and the Channel Islands

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CHAPTER I

General Regulations and Conditions to be Observed by Stations of the Maritime Mobile Service

PART I—GENERAL PROVISIONS

Licence

1. Under the Wireless Telegraphy Act, 1949, a licence issued by the Postmaster General is necessary before any radio apparatus is installed or used on board a ship.

The licence shows the name and call sign of the ship; the public correspondence category; the frequencies, type of emission and power which may be used for transmission; it also specifies the conditions under which the station must be operated (see Appendix 6). It is the duty of operators to observe these conditions to the best of their ability.

Subject to the approval of the master, or other person responsible for the ship, the licence permits all members of the crew and passengers on board a ship to install and use radio apparatus for the reception of programmes by sound sent from authorised broadcasting stations for general reception. A separate licence is required for the reception of television programmes.

Subject to payment in advance of the prescribed annual renewal fee, a ship licence normally continues in force from year to year, but the Postmaster General has power to revoke a licence or to vary its terms at any time.

The licence must be kept in such a way that it can be produced upon request for inspection by the competent authorities at ports at which the ship calls. As far as possible it should be permanently exhibited in the station.

Authority of the Master

2. The radio service of a ship is placed under the supreme authority of the master or of the person responsible for the ship.

Inspection of Stations

3. All stations are subject to inspection by officers appointed for that purpose by the Postmaster General in order to ascertain

that the conditions imposed by the licence are being complied with. Ship stations which are required by the Merchant Shipping Acts and the Merchant Shipping Rules made thereunder to be equipped with radiocommunication apparatus are surveyed annually to ensure that the relative requirements are being complied with. If appropriate, inspection and survey are carried out at the same time, normally by a Radio Surveyor. It is the duty of operators to afford these officers every facility for such inspection.

The competent authorities of any country where a ship calls can require the production of the licence, and, failing its production, or when manifest irregularities are observed, can inspect the apparatus in order to satisfy themselves that it conforms to the requirements of the International Radio Regulations; they can also require the production of the operators' certificates. The authorised inspectors must have in their possession an identity card or badge which they must show at the request of the master or person responsible for the ship. Except in the case of United Kingdom ships in United Kingdom ports, any breach of the regulations observed must be reported in writing by the inspector to the master or other person responsible before leaving the ship.

Secrecy

4. Radio operators and all persons who become acquainted with the contents of radiotelegrams or radiotelephone calls are bound to preserve the secrecy of correspondence. No person shall divulge the contents or even the existence of correspondence transmitted, received, or intercepted by a radio station.

The interception of radiocommunication correspondence, other than that which the station is authorised to receive, is forbidden and in the case where such correspondence is involuntarily received, it shall not be reproduced, nor communicated to third parties, nor used for any purpose, and even its existence shall not be disclosed.

A copy of Section 11 of the Post Office (Protection) Act, 1884, shall be exhibited in the radio room.

Distress Calls and Messages

5. The obligation to accept distress calls and messages is absolute in the case of every station without distinction, and such messages must be accepted with priority over all other messages; they must be answered and the necessary steps must immediately be taken to give effect to them.

False or Deceptive Distress, Safety or Identification Signals

6. The transmission or circulation of false or deceptive distress, safety or identification signals is strictly prohibited.

**Hours of Watchkeeping of Stations in the
Maritime Mobile Services**

7. (1) In order to permit the application of the following rules on the subject of hours of watch, every station of the maritime service must have an accurate clock correctly regulated to Greenwich Mean Time (G.M.T.).

Greenwich Mean Time (reckoned from 0001 to 2400 hours beginning at midnight) must be used for all entries in the radio-communication service log and in all similar documents of ships prescribed to be equipped with radiocommunication apparatus in compliance with an international agreement; this same provision will apply, as far as possible, to other ships.

COAST STATIONS

- (2) The service of coast stations is, as far as possible, continuous (day and night) but certain coast stations may provide a service of limited duration.

The hours of service of coast stations are indicated in the List of Coast Stations, published by the International Telecommunication Union.

Coast stations whose service is not continuous must not close before:

- (a) finishing all operations resulting from a distress call, urgency or safety signal;
- (b) exchanging all traffic originating in or destined for mobile stations which are situated within their service area and have indicated their presence before the actual cessation of work.

SHIP STATIONS

- (3) **For the international public correspondence service**, ship **radiotelegraph** stations are divided into three categories:

- (a) Stations of the first category: these stations maintain a continuous watch.
- (b) Stations of the second category: these stations maintain a service of limited duration at least during the hours fixed by Appendix 3 except that in the case of short voyages the hours of watch are fixed by the administration to which they are subject.

- (c) Stations of the third category: these stations either maintain a service the duration of which is less than that of stations of the second category, or have no fixed hours of watch. When practicable the hours of watchkeeping are indicated in the List of Ship Stations published by the International Telecommunication Union.

The hours of service of ships engaged on international voyages are shown in the List of Ship Stations. As a general rule, when a coast station has traffic on hand for a ship station of the third category not having fixed hours of service and assumed to be within the service area of the coast station, the latter will call the ship station during the first half-hour of the first and third periods of service for ships of the second category performing an eight-hour service, in accordance with the provisions of Appendix 3.

For the international public correspondence service, ship stations equipped exclusively for the use of **radiotelephony** constitute a single category and carry on a service, the duration of which is determined by the administration to which the ship stations are subject.

(4) **For the purpose of distress watchkeeping under the Merchant Shipping (Radio) Rules**, ships equipped with **radiotelegraphy** are divided into three classes as shown in Section 27 (3) and are normally required to maintain the following watches:

- (a) Stations installed in Class I ships: if not provided with a radiotelegraph auto-alarm these stations maintain a continuous listening watch and if provided with a radiotelegraph auto-alarm they maintain a listening watch of sixteen hours per day at the times shown in col. 5 of Appendix 3, Part 1.
- (b) Stations installed in Class II ships: if not provided with a radiotelegraph auto-alarm these stations maintain a continuous listening watch and if provided with a radiotelegraph auto-alarm they maintain a listening watch of eight hours per day at the times shown in col. 4 of Appendix 3, Part 1.
- (c) Stations installed in Class III ships: these stations maintain a listening watch of eight hours per day at the times shown in col. 4 of Appendix 3, Part 1.

Ships which are equipped with **radiotelephony** in compliance with the requirements of the Merchant Shipping (Radio) Rules are required to maintain a listening watch of eight hours per day at the times shown in col.4 of Appendix 3, Part 1.

(5) Ship stations whose service is not continuous shall not close before:

- (a) finishing all operations resulting from a distress call urgency or safety signal;
- (b) exchanging so far as practicable all traffic originating in or destined for coast stations situated within their service area and for mobile stations which, being within their service area, have indicated their presence before the actual cessation of work.

Any ship station not having fixed hours of watch must inform the coast station with which it is in communication of the time of closing and the time of re-opening its service.

Designation of Frequencies

8. Frequencies are expressed in kilocycles per second (kc/s) up to and including 3000 kc/s; in megacycles per second (Mc/s) there-after up to and including 3000 Mc/s; in gigacycles per second (Gc/s) thereafter up to and including 3000 Gc/s.

Classification of Emissions

9. Emissions are classified and symbolised as follows:

AMPLITUDE MODULATION	SYMBOL
With no modulation	A0
Telegraphy without the use of a modulating audio frequency (by on-off keying)	A1
Telegraphy by the on-off keying of an amplitude modulating audio frequency or audio frequencies or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated:	A2
Telephony: Double sideband	A3
Single sideband reduced carrier	A3A
Single sideband suppressed carrier	A3J
Two independent sidebands	A3B
Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier)	A4A
Multichannel voice-frequency telegraphy (single side-band reduced carrier)	A7A
FREQUENCY (OR PHASE) MODULATION	
Telegraphy by frequency shift keying without the use of a modulating audio frequency one of the two frequencies being emitted at any instant	F1

Telegraphy by the on-off keying of a frequency-modulating audio frequency or by the on-off keying of a frequency modulated emission (special case: an unkeyed emission frequenc modulated: ..	F2
Telephony:	F3
Facsimile by direct frequency carrier modulation	F4

PULSE MODULATION

A pulsed carrier without any modulation intended to carry information (e.g. radar)	PO
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Apparatus—General Technical Requirements

- 10.** The energy radiated by receiving apparatus must be reduced to the lowest possible value and must not cause harmful interference to other stations.

All practical steps must be taken to ensure that the operation of any electrical or electronic apparatus does not cause harmful interference to essential radio services.

Dangerous parts of the apparatus must either be screened or effectively isolated.

Changes of frequency in the sending and receiving apparatus of any ship station must be capable of being made as rapidly as possible.

Installations of any ship station must be capable, once communication is established, of changing from transmission to reception and vice versa in as short a time as possible.

When any ship station transmitter itself cannot be controlled in such a way that its frequency satisfies the tolerance specified in Appendix 3 of the Radio Regulations, the ship station must be provided with a device, having a precision equal to at least one-half of this tolerance, for measuring the frequency of emission.

Operation of Broadcasting Service

- 11.** The operation of a broadcasting service by mobile stations at sea and over the sea is prohibited.

Avoidance of Interference

- 12.** A general obligation which is imposed on all stations alike, and which is regarded as of the highest importance, is that they shall interfere as little as possible with the working of other stations. The rules of working are largely designed to prevent such interference.

All stations shall radiate only as much power as is necessary to ensure a satisfactory service.

Superfluous and Unnecessary Signalling Forbidden

13. All stations are forbidden to carry out unnecessary transmissions and the transmission of superfluous signals.

The unauthorised use of radio apparatus for the transmission or reception of correspondence of a private nature is strictly prohibited.

Test Signals

14. Tests and experiments are only permitted in ship stations in so far as they do not interfere with the service of other stations.

Any ship station making test signals must transmit its call sign or other identification at frequent intervals.

Signals used for testing and adjustment must be chosen in such a manner that there will be no confusion with a signal, abbreviation, etc., having a special meaning defined in the Radio Regulations or in the International Code of Signals.

In view of the risk of interference with the reception of broadcast programmes, tests of ships' radio installations in docks and harbours of the United Kingdom must be kept to a minimum, the call sign or other identification of the ship being transmitted at frequent intervals whenever tests are being made.

Use of Radio Apparatus on Merchant Ships in Harbours of the United Kingdom

15. The use of radio apparatus licensed by the Postmaster General and installed on board ships is permitted in the harbours and estuaries of the United Kingdom, subject to the conditions imposed by the licence, and for the following purposes only:
- (a) For the exchange of communications through the nearest Post Office coast station except that in the naval harbours of Portsmouth, Plymouth, Chatham, Sheerness and Rosyth these communications are restricted to those required between masters of ships and owners, agents or dock officials concerning the berthing or departure of a vessel, the handling of its cargo or other operational matters.
 - (b) for radiodetermination and for the reception of messages sent from authorised broadcasting stations for general reception;

- (c) for the exchange of communications in a Port Operations Service, or in a private mobile service licensed by the Postmaster General for a specific purpose.

Radiocommunications between British Merchant Ships and H.M. Ships

- 16.** As a general rule, radiotelegrams to H.M. Ships from British merchant ships are sent to a coast station for onward trans-mission over the Admiralty communication network. Coast stations in the Commonwealth will accept such traffic and route it accordingly.

When necessary, however, H.M. Ships at sea may be called direct on 500 kc/s using the collective call sign "GBXZ", or on 2182 kc/s using the call "Any British Warship". A British warship replying on 500 kc/s will use its international call sign; when answering on 2182 kc/s its own name will be used. Calls to warships other than those mentioned in (b) below should be made immediately following the international silence periods.

When at sea watch is maintained primarily for distress purposes, as follows:

- (a) Destroyers, frigates and other ocean-going warships suitably equipped keep watch on 500 kc/s at the international silence periods (i.e. 15-18 and 45-48 minutes past each hour). Three or more such ships in company maintain watch as in (b).
- (b) Continuous watch on 500 kc/s is maintained by flagships, aircraft carriers and cruisers when they are beyond 200 miles of the coast of the United Kingdom; within this limit watch may be reduced to that shown in (a).
- (c) H.M. Ships carrying less than three radio operators keep watch according to circumstances either on 500 kc/s or 2182 kc/s at the appropriate international silence periods except when the ship is in visual contact with a naval shore signal station.

Infringements of the Radio Regulations

- 17.** It is the duty of radio operators to report to the Postmaster General through their employers any infringements of the Radio Regulations which they may detect.

Silence Periods

18. In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorised bands between 405 and 535 kc/s must, during their hours of service, take the necessary measures to ensure watch on the international radiotelegraph distress frequency, 500 kc/s for three minutes twice each hour beginning at x h. 15 and x h. 45 G.M.T.; those normally keeping watch on frequencies in the authorised bands between 1605 and 2850 kc/s must, during their hours of service, and as far as possible, take steps to keep watch on the international radiotelephone distress frequency, 2182 kc/s for three minutes twice each hour beginning at x h. 00 and x h. 30 G.M.T.

Time Signals

19. Time signals are sent out from certain stations, particulars of which are contained in the List of Radiodetermination and Special Service Stations, published by the International Tele-communication Union. The clock in the radio room should be checked against time signals at least once a day to ensure correct timing, especially during the silence periods mentioned in Section 18.

Order of Priority of Communication in the Mobile Service

20. The term "communication" as used in this section means radiotelegrams and radiotelephone calls. The order of priority for communications in the maritime mobile service shall be as follows:
1. Distress calls, distress messages, and distress traffic.
 2. Communications preceded by the urgency signal.
 3. Communications preceded by the safety signal.
 4. Communications relating to radio direction-finding.
 5. Communications relating to the navigation and safe movement of aircraft.
 6. Communications relating to the navigation, movements, and needs of ships, and weather observation messages destined for an official meteorological service.
 7. Government radiotelegrams: Priorité Nations.

8. Government communications for which priority has been requested.
9. Service communications relating to the working of the radiocommunication service or to communications previously exchanged.
10. Government communications other than those shown in 7 and 8 above and all other communications.

Wrecks and Casualties

21. Ship stations are invited to furnish to United Kingdom coast stations (including Portishead Radio) information concerning wrecks and casualties at sea for the purpose of communication to marine agencies.

Messages containing information concerning the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, must be transmitted as soon as possible to other ship stations in the vicinity, and to the appropriate authorities at the first point on the coast with which contact can be established. These transmissions must be preceded by the safety signal.

Documents to be Carried by Ship Stations

22. Ship stations must be provided with the documents enumerated in the appropriate section of Appendix 7.

Service Documents

23. The following documents are published by the Secretary General of the International Telecommunication Union:

DOCUMENT

List of Coast Stations	Republished every three years with recapitulative supplements every six months.
List of Ship Stations	Republished every year without supplement.
List of Radiodetermination and Special Service Stations (Radiobeacon Stations, etc.).	Republished at intervals, with recapitulative supplements every six months.

Alphabetical List of Call Signs of Stations used by the Maritime Mobile Service (Coast, Ship, Radiodetermination and Special Service Stations). Republished every two years with recapitulative supplements every three months.

Call Signs and Signals of Identification

- 24.** (1) Transmissions without identification are forbidden. Transmissions from all stations must contain an indication by which the station making the transmission can be identified. Such indications must take the form of international call signs or other internationally agreed forms of identification as detailed below.

(2)*

RADIOTELEGRAPHY

- (a) Coast and aeronautical stations
 - a call sign of three letters, or three letters followed by preferably one or two, but not more than three digits (other than 0 or 1 in cases where they immediately follow a letter).
- (b) Ship stations
 - a call sign of four letters;
- (c) Aircraft stations
 - a call sign of five letters;
- (d) Ships' survival craft stations
 - the call sign of the parent ship followed by two digits (other than 0 or 1 in cases where they immediately follow a letter);
- (e) Aircraft survival craft stations
 - the complete call sign of the parent aircraft followed by a single digit other than 0 or 1.
- (f) Mobile stations other than ship or aircraft stations
 - a call sign of four letters followed by a single digit other than 0 or 1.
- (g) Amateur and Experimental stations
 - a call sign of one or two letters and a single digit (other than 0 or 1 in the case of experimental stations), followed by a group of not more than three letters.

*In certain cases the first letter of the call sign may be replaced by a digit.

(3)

RADIOTELEPHONY

(a) Coast stations

- the call sign as in (2)(a) above; or;
- the geographical name of the place as it appears in the List of Coast Stations, followed preferably by the word RADIO or by any appropriate indication;

(b) Ship station

- the call sign as in (2)(b) above; or;
- two or three letters followed by four digits (other than or 1 in cases where they immediately follow a letter); or
- the official name of the ship preceded, if necessary, by the name of the owner on condition that there is no possible confusion with distress, urgency and safety signals;

(c) Ships' survival craft stations

- a call sign as in (2)(d) above; or;
- the name of the parent ship followed by two digits;

(d) Aeronautical stations

- the name of the airport or geographical name of the place, followed if necessary, by a suitable word indicating the function of the station;

(e) Aircraft stations

- the call sign as in (2)(c) above, which may be preceded by a word designating the owner or the type of aircraft, or.
- a combination of characters corresponding to the official registration mark assigned to the aircraft, or
- a word designating the airline, followed by the flight identification number;

(f) Aircraft survival craft stations

- a call sign as in (2)(e) above;

PART 2—OPERATORS' CERTIFICATES AND SERVICE QUALIFICATIONS

Operators' Certificates

25. (1) The ship station of a United Kingdom ship may be operated only by persons holding an appropriate **Certificate of Competence** issued or recognised by the Postmaster General, **and** possessing his written **Authority to Operate** the particular type of ship station. However, in the case of a ship radiotelephone station, provided that the radiotelephone equipment is under the control of such a person, other persons may use the radio-telephone service.
- (2) **Certificates of Competence** are issued to applicants who qualify in the examinations detailed in Appendix 4.

A candidate for the issue of a certificate must be a British subject, a British protected person or a citizen of the Irish Republic and, in addition, satisfy one of the following conditions:

- (a) if he was a British subject, a British protected person or a citizen of the Irish Republic at birth—
 - (i) at least one of his parents must be, or have been at death, a British subject, a British protected person or a citizen of the Irish Republic, or
 - (ii) the candidate must have resided in a country or territory within the Commonwealth or in the Irish Republic or been employed elsewhere in the service of the Crown or partly have so resided and partly been so employed for at least five years out of the last eight years;
- (b) if he was not a British subject, a British protected person or a citizen of the Irish Republic at birth, he must have resided in a country or territory within the Commonwealth or in the Irish Republic or been employed elsewhere in the service of the Crown or partly have so resided and partly been so employed for at least five years out of the last eight years;
- (c) if not qualified under (a) or (b) he must satisfy the Postmaster General that he is so closely connected with a

country or territory within the Commonwealth either by ancestry, upbringing or residence, or by reason of national service, that an exception may properly be made in his favour.

There are two classes of certificate, as well as a special certificate, for radiotelegraph operators, and two categories of certificate, general and restricted, for radiotelephone operators.

The holder of a first or second class radiotelegraph operator's certificate may carry out the radiotelephone service of any ship station.

The holder of a radiotelephone operator's general certificate may carry out the radiotelephone service of any ship station.

The holder of a radiotelephone operator's restricted certificate may carry out the radiotelephone service of any ship station, when working on frequencies of the maritime mobile service, provided that:

- the carrier power of the transmitter does not exceed 50 watts, or
- the carrier power of the transmitter does not exceed 250 watts and there are no manually operated frequency determining controls other than simple switches.

The radiotelegraph service of ships for which a radiotelegraph installation is not prescribed by international agreement, as well as the radiotelephone service of ship stations for which only a restricted radiotelephone operator's certificate is required, may be carried out by an operator holding a radiotelegraph operator's special certificate.

Exceptionally, the second class radiotelegraph operator's certificate as well as the radiotelegraph operator's special certificate may be limited exclusively to the radiotelegraph service. In such cases the certificate shall be suitably endorsed.

(3) **Authorities to Operate** granted by the Postmaster General specify the period over which they remain in force. However, the Postmaster General may at any time suspend an Authority to Operate with a view to its revocation if it appears to him that there are sufficient grounds so to do. In a case of suspension, the holder has the right to have the matter referred to an Advisory Committee under the First Schedule to the Wireless Telegraphy Act, 1949. He must return the Authority to Operate to the Postmaster General upon receiving notice of suspension.

Lost Certificates

26. Certificates should be carefully preserved. In case of loss through avoidable causes, a duplicate will be issued only on payment of the requisite fee.

Operators' Service Qualifications

27. (1) The service qualifications required are fixed by:
- (a) the category in which the ship station is licensed for public correspondence under the Radio Regulations, and
 - (b) the Ministry of Transport classification of ships for safety purposes under the Merchant Shipping (Radio) Rules.
- (2) The requirements under (1) (a) above for ship stations equipped with radiotelegraphy apparatus are:

CATEGORY 1 (Stations always open).

At least one operator holding a first class radiotelegraph operator's certificate. Before becoming chief operator the holder of a first class radiotelegraph operator's certificate must have had at least one year's experience as operator on board ship or in a British coast station.

CATEGORY 2 (Stations having limited working hours of either 8 or 16 hours per day).

At least one operator holding either a first or second class radiotelegraph operator's certificate. Before becoming chief operator the holder of a first class radiotelegraph operator's certificate must have had at least six months' experience as operator on board ship or in a British coast station, and the holder of a second class radiotelegraph operator's certificate must have had at least six months' experience as an operator on board ship.

CATEGORY 3 (Stations whose hours of service are less than those prescribed for stations in the 2nd category, and stations having no fixed working hours).

- (i) Where the radiotelegraph installation is prescribed by international agreement, at least one operator holding either a first or second class radiotelegraph operator's certificate. No previous experience as an operator is required.
- (ii) Where the radiotelegraph installation is provided, but not prescribed by international agreement, at least one operator holding a first or second class radiotelegraph operator's

certificate, or a radiotelegraph operator's special certificate. No previous experience as an operator is required.

The requirements under (1) (a) above for ship stations equipped with radiotelephony apparatus are:

At least one operator holding a first or second class radiotelegraph operator's certificate or a general certificate in radiotelephony, or, a radiotelegraph operator's special certificate or a restricted certificate in radiotelephony (subject to the conditions of Section 25).

(3) The classification and requirements under (1) (b) above are:

CLASS I. Ships carrying more than 250 passengers or in respect of which there is in force a certificate issued by the Minister of Transport, or by any authority empowered in that behalf by the laws of any country other than the United Kingdom, to the effect that they are fit to carry more than 250 passengers, and which:

(a) in the case of British ships registered in the United Kingdom are at sea for more than sixteen hours between two consecutive ports;

(b) in the case of ships other than British ships registered in the United Kingdom, arrive at a port in the United Kingdom having been at sea for more than sixteen hours since last leaving port, or in respect of which clearance or transire is sought from a port in the United Kingdom for a voyage requiring more than sixteen hours at sea before reaching port.

CLASS II. (a) Passenger ships other than those of Class I.

(b) Cargo ships of 1,600 gross tons and upwards.

CLASS III. Cargo ships of 500 gross tons and upwards but of less than 1,600 gross tons.

Class I and Class II ships are required to be equipped with radiotelegraphy and Class III ships with either radiotelegraphy or radiotelephony

Requirements for Ships Equipped with Radiotelegraphy

Class of Ship	Number of Radio Operators Required†		Sea Service Experience of at least one of the Radio Operators
	If ship not fitted with radiotelegraph auto-alarm apparatus.	If ship fitted with radiotelegraph auto-alarm apparatus.	
I	Three operators of whom at least one must hold a first class radiotele-graph operator's certificate.	Two operators of whom at least one must hold a first class radiotelegraph operator's certificate.	Two years
II(a)	Two operators if the ship is at sea for not more than 48 hours between consecutive ports, and three operators if it is at sea for more than 48 hours between consecutive ports. At least one operator must hold a first class radiotele-graph operator's certificate	One operator holding a first class radiotele-graph operator's certificate.	One year
II(b)	As for II(a) except that all the operators may hold second class radiotelegraph operator's certificate	One operator holding a first or second class radiotelegraph operator's certificate.	Six months in the case of ships of 3,000 gross tons or upwards; three months in the case of ships of 1,600 gross tons or upwards but under 3,000 gross tons.
III	One operator holding a first or second class radiotelegraph operator's certificate	One operator holding a first or second class radiotelegraph operator's certificate.	None

†Referred to in Merchant Shipping (Radio) Rules as "Radio Officers".

Requirements for Ships Equipped with Radiotelephony :

Class of Ship	Number of Radio Operators Required*	Sea Service Experience of at least one of the Radio Operators
III	One operator holding a first or second class radiotelegraph operator's certificate, a radio-telegraph operator's special certificate, or a general or restricted radiotelephone operator's certificate.	None

*Referred to in Merchant Shipping (Radio) Rules as "Radiotelephone Operators".

(4) It is necessary that first and second class radiotelegraph operators' certificates of competence issued by the Postmaster General should show when the holder has completed six months', twelve months' and two years' service as operator on board ship. Operators should therefore present their certificates to a Radio Surveyor for endorsement as and when the foregoing service qualifications have been obtained.

(5) Before being allowed to serve as a radio operator on a ship registered in the United Kingdom which is required to be equipped with radiotelegraph apparatus by the Merchant Shipping (Radio) Rules, 1952, the holder of a Postmaster General's first or second class radiotelegraph operator's certificate of competence which is more than two years old is, under Rule 16 (2) of these Rules required to satisfy the Postmaster General by re-examination or otherwise that he still possesses all of the qualifications described in his certificate, if he has not had a total of three months' experience or if his last experience was more than two years previously. The nature and extent of any re-examination will be determined by the length of time the applicant has been away from the sea. The procedure is given in Appendix 4, Section 2 (11).

PART 3—SHIPS' RADIO LOGS

Logs of Ships Equipped with Radiocommunication Apparatus Required by the Merchant Shipping (Radio) Rules, 1952

28. (1) Under the Merchant Shipping (Radio) Rules 1952 and the Radio Regulations, every ship equipped with a radiotelegraph installation must carry a radiotelegraph log, and every ship fitted with a radiotelephone installation a radiotelephone log. (A specimen of each type of log is given in Appendix 5.) The Radiotelegraph Log must be kept in the radiotelegraph room during the voyage, and the Radiotelephone Log near the radio-telephone installation. The logs must be available for inspection by any officer authorised by the Minister of Transport or the Postmaster General.

RADIOTELEGRAPH LOG

- (2) The Radiotelegraph Log is compiled in two parts and must be completed in accordance with the following instructions:

Part 1

Section A—Particulars of the radio staff must be entered in the form provided.

Section B—A list of all batteries forming part of the main and emergency installations, including those used for the emergency lighting, the auto-alarm, the direction-finder and the automatic sending device (if separate batteries are provided for this purpose) and for the lifeboat installations including the portable lifeboat equipment, must be entered on the form provided.

Section C—A daily report on the charge condition of each battery must be entered. The report must contain details of the amount of charge given, if any, and any other maintenance such as topping-up, which has been carried out.

Section D—Once per month a full examination of each battery, cell by cell, must be made, and a report on the general condition entered, cell by cell, in this section.

Sections B, C and D are to be prepared in duplicate. The carbon copies (perforated sheets) must be detached prior to the handing in of the log and carefully filed in the radiotelegraph

room so that a permanent record of the batteries will always be available for the information of succeeding operators, shore maintenance staff and Radio Surveyors.

Part 2

This part of the log will form a complete record of the work of the ship's radiotelegraph station for the period of the voyage. In opening the log the operator must record the names of the ports of departure and destination. He must then enter in chrono-logical order:

- (i) His name, and the times at which he goes on and off watch,
- (ii) All distress messages and distress traffic in full,
- (iii) A positive entry each half hour during the hours of watch as to whether the ship station has observed the silence periods,
- (iv) All urgency and safety communications in full,
- (v) The position of the ship at least once per day if the ship's rules permit,
- (vi) Details of voyage particulars (TR) forwarded to Area stations,
- (vii) Traffic lists from Commonwealth long-distance Area stations in full,
- (viii) Calls and operating signals exchanged. (Entries in respect of messages in the public correspondence service should be restricted to the call, serial number of the message and time received or sent. Difficulties encountered in disposing of traffic should be recorded.)
- (ix) Details of calls and operating signals of other ships and coast stations (entries relating to the working of other stations should be made about once every ten minutes),
- (x) Other service incidents, including any incidents connected with the radiotelegraph service, which occur during the watch and which may appear to be of importance to safety of life at sea.
- (xi) Times of arrival at and departure from intermediate ports,
- (xii) A positive entry when beginning or terminating loud speaker watch on the distress frequency, or when watch on the distress frequency is discontinued to enable the operator to perform other essential radiotelegraph duties which make it impracticable to maintain the watch.

- (xiii) Any failures of the main power supply or breakdowns of apparatus and details of repairs effected.
- (xiv) A record of the daily and other tests of the reserve transmitter and a daily statement that the reserve power supply is satisfactory or otherwise.
- (xv) A daily statement confirming that all batteries have been tested and brought up to the normal fully charged condition.
- (xvi) Details of the tests and any failures of the auto-alarm (if fitted). (These tests must be made before the commencement and at the end of each auto-alarm watch.)
- (xvii) The times at which auto-alarm watch is set and terminated.
- (xviii) Details of the tests of lifeboat radio equipment.
- (xix) A daily entry regarding comparison of the radiotelegraph room clock with Standard Time, including an indication of any errors observed and corrections made. Authentic time signals received from land stations shall be acceptable as Standard Time.

The entries in Part 2 of the log are to be prepared in duplicate. The carbon copies (perforated sheets) must be detached and carefully fastened together in correct order to form a copy of the diary, which should be finally disposed of in the manner directed by the operating company or the shipowner as the case may be.

Notes on the Keeping of the Log. The importance of keeping the log correctly by duly marking all entries at the proper time and with the strictest regard to form cannot be too strongly stressed. Care should be taken when there is a change of staff to see that the log, when handed over, is complete and up to date. Entries must always be made in order of time and date and no blanks left. The entry "on watch" must be made by the operator beginning a watch, followed by his signature. The entry "off watch" must be made by the operator being relieved or terminating his watch, followed by his signature. All log entries must be completed at the end of the watch by the operator responsible for the watch entries. The use of initials or signs cannot be accepted in lieu of the operator's signature.

If the number of pages in Part 2 of the log is insufficient, recourse should be made to a further copy or copies of Part 2. Any copies used in continuation should be clearly marked with the order of sequence.

Inspection of the Log. Both parts of the log must be inspected daily and signed by the operator in charge; the log must also be submitted daily to the Master for his signature and his attention must be directed to any entries of importance or interest.

Disposal of the Log. In the case of foreign-going ships on single voyage agreements, Parts 1 and 2 of the log (with any continuation books) must be delivered, along with the Official Log Book, to the Superintendent of the Mercantile Marine Office before whom the ship's crew is discharged. This delivery must be made within 48 hours after the ship's arrival at her final port of destination in the United Kingdom. In the case of ships on half-yearly or other running agreements the complete radiotelegraph log for the previous half-year must be delivered to a Superintendent of a Mercantile Marine Office within 21 days of the termination of the current agreement. Before the radiotelegraph log is so delivered care should be taken to remove and dispose of the carbon copies as directed above.

RADIOTELEPHONE LOG

(3) The Radiotelephone Log is in two sections, and must be completed in accordance with the following instructions:

Section A—Particulars of the members of the crew qualified to operate the installation must be entered in the form provided.

Section B—This section of the log will form a complete diary of the radio service. The entries in this part of the log are to be prepared in duplicate. The carbon copies (perforated sheets) must be detached and carefully fastened together in correct order to form a copy of the diary, which should be finally disposed of in the manner directed by the operating company or the shipowner as the case may be. The entries to be made in this section must include:

- (i) The name of the operator, and the times at which he goes on and off radio watch.
- (ii) Details of all distress messages heard or sent and of any distress traffic which takes place. It is important that the general sense of these messages should be entered.
- (iii) A statement each half hour during the hours of watch that the silence period has been observed.

- (iv) A summary of all urgency and safety communications received.
- (v) A summary of communications exchanged between the ship station and coast stations or other ship stations. Entries in respect of messages in the public correspondence service should be restricted to the serial number of the message, and the time sent or received. (The actual message should be recorded on the appropriate form.) Difficulties experienced in disposing of traffic should be recorded.
- (vi) Important service incidents of all kinds, such as breakdowns of the installation and repairs effected.
- (vii) Details of the charging of batteries. The times when the batteries are placed on and taken off charge must be stated. In cases where the batteries are charged, or exchanged for charged batteries on shore, the log should show when and where the charging, or changing, was made.
- (viii) The approximate position of the ship at least once per day if the ship's rules permit.

Notes on the Keeping of the Log. It is important that the log should be correctly kept by making all entries at the proper time, being always complete and up to date. Entries must always be made in order of date and time and no blanks left. The entries "on watch" and "off watch" must be followed by the operator's signature. All log entries must be completed by the end of the watch. If the number of pages in Section B of the log is insufficient to cover the period of currency of the log, the log should be continued in a separate book.

Inspection of the Log. The Master must sign the log daily, and where the Master is not the radiotelephone operator the latter should submit the log to the Master for this purpose, drawing his attention to any entries of importance or interest.

Disposal of the Log. In the case of foreign-going ships the radiotelephone log (with any continuation books) must be delivered, along with the Official Log Book, to the Superintendent of the Mercantile Marine Office before whom the ship's crew is discharged. This delivery must be made within 48 hours after

the ship's arrival at her final port of destination in the United Kingdom.

In the case of ships on half-yearly or other agreements, the radiotelephone log should be delivered to a Superintendent of a Mercantile Marine Office within 21 days of the termination of the agreement. Before the radiotelephone log is so delivered care should be taken to remove and dispose of the carbon copies as directed above.

Logs of other Ships Equipped with Radiocommunication Apparatus

- 29.** Under the Radio Regulations each such ship fitted with a radiotelegraph or a radiotelephone installation must carry a radio log (Diary of the Radio Service). The time of all entries made in the log must be in Greenwich Mean Time. Each sheet of the log must be numbered and dated, and when complete must be filed either aboard the ship or at established offices of the licensee. The log must be available for inspection by any officer authorised by the Minister of Transport or the Postmaster General.

The following entries must be recorded in the log as they occur with the time of their occurrence:

SHIP RADIOTELEGRAPH STATIONS

- (i) The operator's name and the times at which he goes on and off watch,
- (ii) Time of arrival at and departure from ports, giving names of each,
- (iii) All communications relating to distress traffic in full.
- (iv) All urgency and safety communications,
- (v) All communications exchanged between the ship station and coast stations or other ship stations,
- (vi) Service incidents of all kinds, such as failures of power supply or breakdowns of apparatus, and details of repairs effected,
- (vii) The position of the ship at least once per day if the ship's rules permit.

SHIP RADIOTELEPHONE STATIONS

- (i) The operator's name and the times at which he goes on and off watch.
- (ii) Time of arrival at and departure from ports, giving names of each.

- (iii) A summary of all communications relating to distress, urgency and safety traffic,
- (iv) A summary of communications exchanged between the ship station and coast stations or other ship stations,
- (v) A reference to important service incidents, such as failures of power supply or breakdowns of apparatus,
- (vi) The position of the ship at least once per day if the ship's rules permit.

Battery Maintenance, Particulars to be Entered in Log

- 30.** If secondary batteries form part of the radio installation of a ship station, not prescribed to be equipped with radiocommunication apparatus under the Merchant Shipping (Radio) Rules, they should be maintained in a fully-charged condition. A statement that this requirement has been fulfilled must be inserted in the radio log each day.

CHAPTER II

Radiotelegrams and Radiotelephone Calls

PART 1—PREPARATION AND HANDING IN OF RADIOTELEGRAMS

Acceptance of Radiotelegrams

- 31.** A radiotelegram is made up of the following parts arranged in order:
- (a) preamble;
 - (b) service indications;
 - (c) address;
 - (d) text;
 - (e) signature.

The preamble consists of the prefix (if any), the name of the ship or office of origin, the serial number of the radiotelegram, the number of words, the date and time of handing-in, and any service instructions required such as information for the routing of the telegram.

The date and time of handing-in consist of two groups of figures, the first indicating the day of the month and the second the time of handing-in, in G.M.T., by means of a four figure group 0001 to 2400. Coasting ships outside Zone "A" (see Appendix 3) may, if required, use zone times, instead of G.M.T., to indicate the time of handing in, in which case the four figure time group is followed by the letter F.

The paid service indication either identifies the radiotelegram as being within a particular category or denotes a special service requested by the sender, or, in some cases, by the addressee.

The address must contain all the particulars necessary to ensure delivery of the radiotelegram to the addressee without enquiries or requests for information.

The text and signature may be expressed in plain language, in secret language or in a combination of both, except in the case of radiotelegrams to those countries, shown in the table of telegraph rates in the Post Office Guide, which either do not admit secret language telegrams, or admit them only subject to certain restrictions.

The name and address of the sender should be written in the appropriate space on the form; these particulars must be supplied if the service (e.g. = PC =) sought by the sender requires it.

A duplicate of each radiotelegram delivered to a person on board a ship must be made out at the time of receipt. The duplicate form should show, in addition to the actual message and usual service particulars, the date and time of receipt, the time at which it was delivered to the addressee, and, if received through a coast station, the name of the coast station.

In the case of a radiotelegram handed in on board ship the particulars to be transmitted in the preamble should be entered on the form by the accepting officer, together with the total amount charged, the date and time of transmission to the coast or ship station, the name of such station, and the signature of the transmitting officer.

A note should also be made of any other point likely to affect the accounts, for instance, failure to obtain an acknowledgment of receipt.

The forms of radiotelegrams accepted and the duplicates of those delivered on board ship must be disposed of as arranged between the Postmaster General and the Licensee or the Company operating the ship station; precautions must be taken to ensure secrecy.

Classes of Radiotelegram Not Admitted

32. The following classes of radiotelegram cannot be accepted:
- (a) Money order telegrams.
 - (b) Telegrams "to follow the addressee".
 - (c) Urgent radiotelegrams, except as regards transmission over the telegraph systems of administrations which accept such telegrams (see also Section 46).
 - (d) Letter telegrams. (This prohibition does not apply to the Radiomaritime Letter (Ship Letter Telegram) service through coast stations.)
 - (e) Telegrams without text.

Sender's Instructions

33. A sender, on giving the necessary instructions and paying the appropriate fees, may:
- (a) prepay a reply of any value to his radiotelegram;
 - (b) have the radiotelegram repeated from office to office during transmission;

- (c) cancel, alter or amplify a radiotelegram already transmitted;
- (d) have his radiotelegram delivered to more than one address or to a "Poste Restante" or "Telegraph Restant";
- (e) have it delivered (in certain cases) by post or special means;
- (f) secure priority for the radiotelegram over the telegraph systems of those administrations which accept "urgent" telegrams.

These special services are described in detail in Part 3.

Prefixes

34. The only prefixes used in radiotelegrams are:

- S Government message for which priority has been requested. ~~(See footnote*)~~
- F Government message for which the sender has not requested priority in transmission. ~~(See footnote*)~~
- A Service message. (See Section 60)
- ST Paid service message. (See Sections 56 and 58)
- RST Reply to paid service message. (See Section 58)
- URGENT Urgent radiotelegram. (See Section 46)
- OBS Meteorological radiotelegram.

Routing of Radiotelegrams

35. The sender of a radiotelegram from a ship need not be asked to select a route for transmission beyond the coast station. If the telegraph tariff shows more than one rate of charge for the class of telegram to the destination concerned, the sender must choose a rate, and if he chooses a rate which applies only to one route, the name of that route should be entered in the service instructions. If he chooses a rate applicable to more than one route, the actual rate (e.g. "4/5 rate", "5 fr. 30 rate", or "5 fr. 30 tariff")

~~*The sender of a Government radiotelegram may claim the right of priority by marking it with the words "with priority" (or "avec priorité"). Government telegrams for which the right of priority has not been claimed rank with ordinary correspondence in order of transmission and bear the prefix "F"~~

~~The word "Etat" should be inserted at the end of the preamble (in the service instructions) of Government radiotelegrams.~~

as appropriate) must be entered in the service instructions and signalled forward.

If the sender uses the form of a particular Telegraph Company and a rate to the place in question by the Company's route is shown in the tariff, the form must be taken as indicating the sender's choice of the route concerned.

The sender may, if he wishes, request that his radiotelegram be transmitted either by cable or by wireless over the routes of the telegraph system or by any route available according to the tariff, even if there is only one rate of charge. This choice is entered in the service instructions in the form "Fil" when the sender requests transmission by a cable route and "Anten" for a wireless route.

Any route indication should be signalled to the coast station in the service instructions of the radiotelegram. The abbreviated forms of route indications, shown in the tariff, should be used.

Plain Language

36. Plain language is that which presents an intelligible meaning in one or more of the languages admitted for international telegraph correspondence, each word and each expression having the meaning normally assigned to it in the language to which it belongs. Radiotelegrams in plain language may be expressed in any of the principal European languages; in addition, Latin and Esperanto may be admitted. They must be written in letters of the English alphabet.

By telegrams in plain language are meant those of which the text and signature are wholly in plain language. The character of a telegram in plain language is not changed by the presence of:

- (a) numbers written in letters or figures, groups composed either of letters or of figures, or of figures and signs, provided that these numbers, groups and signs have no secret meaning;
- (b) proper names or abbreviated addresses;
- (c) abbreviated denominations of international or national organisations, including business undertakings, in the form of initial letters combined as one group, the admissibility of which shall be decided by the country of origin of the telegram;
- (d) commercial marks, trade marks, designations of goods, arbitrary technical terms used to denote machines or parts of machines, reference numbers or indications and other expressions of the same kind, provided that these

marks, designations, technical terms, reference numbers or indications, and expressions are shown in a catalogue available to the public, or in a price list, invoice, bill of lading or similar document;

- (e) groups denoting house numbers, registration numbers or letters of motor vehicles, designations of ships, aircraft or railway trains as well as flight and train numbers; groups clearly representing money, ordinal numbers, indications of time of day; and groups representing exchange or market quotations, scientific formulae or meteorological observations or forecasts;
- (f) abbreviated expressions in current use in ordinary or commercial correspondence, such as fob, cif, caf, svp, or any similar expression, the admissibility of which shall be decided by the country of origin of the telegram;
- (g) a single check word or check number placed at the beginning of the text and not exceeding five letters or five figures in length.

All the expressions mentioned in (c), (d) and (e) may, exceptionally, be composed of letters, figures, signs, or a mixture thereof.

Combinations or alterations of plain language words contrary to the usage of the language to which they belong shall not be allowed in plain language telegrams, except in the cases specified in Section 41 (d)

Secret Language

37. Except for the cases provided for in (a) to (g) of Section 36, by secret language is meant:

- (a) artificial words composed exclusively of letters; such words must not exceed five letters in length;
- (b) figures or groups of figures having a secret meaning;
- (c) real words belonging to one or more of the languages admitted for telegraph correspondence in plain language which are not used with the meaning normally assigned to them in the language to which they belong and consequently do not form intelligible phrases;
- (d) other words or expressions not fulfilling the conditions laid down for plain language;
- (e) a mixture of the words and expressions mentioned in (a) to (d).

The mixture within a single group of any combination of letters, figures, or signs which has a secret meaning shall not be permitted. Words in secret language may not contain accented letters.

By secret language telegrams are meant those containing in their text or signature one or more words in secret language.

Address

38. (1) The following categories of address of a radiotelegram from a ship are permitted (where appropriate, supplemented by a postal code designation):
- (a) full address;
 - (b) registered address;
 - (c) telephonic address;
 - (d) telex address;
 - (e) "Poste Restante" or "Telegraph Restant" address;
 - (f) post office box address.

If it is doubtful whether, without any addition, a message could be correctly routed without difficulty, a ship station not supplied with the Official List of Telegraph Offices may add to the name of the telegraph office of destination:

- the name of the territorial subdivision, or
- the country of destination, or
- both of the above.

The name of the telegraph office and the supplementary particulars are then counted and charged for as a single word. The coast station operator receiving the radiotelegram retains or deletes these particulars, or further amends the name of the office of destination as necessary for forwarding the radiotelegram to its proper destination.

The address of a telegram addressed "Poste Restante" or "Telegraph Restant" must include the name of the addressee and, where possible, his christian name or initials; the use of initials alone, figures, christian name only, fictitious names or arbitrary signs of any kind, is not allowed in the address of such messages.

In the address of a radiotelegram for China, groups of four figures may be used to designate the name and abode of the addressee.

- (2) The address of radiotelegrams destined for ship stations must be as complete as possible and must include:

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- (a) the name or designation of the addressee, with supplementary particulars if necessary;
- (b) the name of the ship station followed, when necessary, by its call sign, the latter separated from the name of the station by a fraction bar, as shown in the List of Ship Stations;
- (c) the name of the coast station through which the message is to be forwarded, as it appears in the List of Coast Stations.

If the ship does not appear in the List of Ship Stations, the sender should, if possible, indicate the nationality and route followed by the ship.

The name and call sign may be replaced, at the risk of the sender, by particulars of the passage made by such ship, indicated by the names of the ports of departure and of destination, or by any other equivalent indication.

When, because of duplication of names, the name of a ship station is followed by its call sign, the latter is separated from the name of the station by a fraction bar.

EXAMPLE: BRITTANY/GMZS (not BRITTANYGMZS).

PART 2—COUNTING OF WORDS IN RADIOTELEGRAMS

Counting of Chargeable Words

- 39.** The number of words counted for purposes of charge should include all that the sender writes on the telegraph form to be transmitted. No charge is to be made for the transmission of the particulars in the preamble.

Words, Groups and Expressions Counted as One Word Regardless of the Number of Characters

- 40.** (1) The following shall be counted as one word:
- (a) service indications;
 - (b) in paid service advices, the original telegram number , the number(s) of the preceding paid service advice(s);
 - (c) each isolated letter or figure;
 - (d) each isolated sign—including fraction bar, hyphen, dash or apostrophe used to separate or join a word or text—transmitted at the request of the sender.
 - (e) the two signs forming brackets (parentheses) when they enclose one or more words or groups, except when they appear in one of the groups mentioned in Section 36, (a), (c), (d) and (e) without enclosing it, or if one of the bracket signs appears in one of these groups, each sign shall be counted as one character;
 - (f) the signs forming quotation marks (inverted commas) when they enclose one or more words or groups except when they appear in one of the groups mentioned in Section 36, (a), (c), (d) and (e) without enclosing it, or if one such sign appears in one of these groups, each sign of the inverted commas (double or single apostrophe) shall be counted as one character.
- (2) The following are each counted as one word in the address:
- (a) the name of the telegraph office or land station of destination written as it appears in the first column of the Official List of Telegraph Offices and completed by all the particulars given in that column;

- (b) the name of the telegraph office or of the land station of destination completed either by the name of the country or smaller division of territory, or both, or by any other particulars when the name of the office has not been published in the Official List;
- (c) the name of the ship station of destination written as it appears in the List of Ship Stations;
- (d) the name of the ship station of destination, completed if necessary by the call sign of the station, or by any other particulars when this name does not appear in the List of Ship Stations;
- (e) the name of the telegraph office of destination completed by particulars intended to distinguish it from other offices of the locality, e.g. London W1;
- (f) the names of countries or small divisions of territory written as shown in the Official List including any alter-native forms given in the preface to this List;
- (g) the geographical or administrative name of the place where the telegram has to be delivered, in case this locality has no telegraph office:
- (h) the telephone number and the name of the exchange together with the indicator = TF =, e.g. = TF 873455 = or = TF Murray Hill 9-12 ==. Similarly, a telex number together with the indicator = TLX = e.g. = TLX 20074 =.

If it has not already been done, the accepting officer must join up the different parts of each of the expressions which are specified in (2) (a) to (g) and counted as one word, provided that this does not distort the name of the office of destination. In the latter case, the accepting officer shall separate the different parts by a fraction bar and the whole shall count as one word.

Words, Groups and Expressions Counted at the Rate of One Word for Each Fifteen Letters

- 41.** The following shall be counted at the rate of fifteen letters to the word, plus one word for each fifteen letters or fraction of fifteen letters in excess:
- (a) each word appearing in a standard dictionary, each other word in common use, provided it is not a combination or a contraction of such words or any expression contrary to the usage of the language;
 - (b) each arbitrary or abbreviated address:

- (c) words separated or joined by an apostrophe, a hyphen or a fraction bar, when they so appear in a standard dictionary.

Unless the sender desires otherwise, the parts may be joined into a single word, deleting the apostrophe, hyphen or fraction bar.

If they do not appear in a standard dictionary in this form or as a single word, or if the sender expressly requests the transmission of the sign in question, each of the words and the sign will be counted as separate words.

- (d) Exceptionally, the following are counted at the rate of fifteen letters to the word if written without a break: family names; full or abbreviated names of places, squares, boulevards, streets, canals, rivers and other public ways; names of ships, aircraft, railway trains, etc.; whole numbers, fractions, decimal or fractional numbers written in words; ordinary compound words; in the text and signature, names of telegraph offices, and of land and ship stations, names of towns, countries and smaller divisions of territory (see Section 40, (2) (a) to (h)). If the accepting officer observes that the elements of such names have not been joined by the sender he should draw the attention of the sender to the possibility of such grouping.
- (e) Other names in the address, text or signature should be counted as separate words in accordance with (a) to (c) above.

Words, Groups and Expressions Counted at the Rate of One Word for Each Five Characters

42. The following shall be counted at the rate of five characters to the word, plus one word for each five characters or fraction of five characters in excess:
- (a) groups composed of letters, figures, signs, or, in the cases authorised in Section 36, (a) and (c) to (e), of a mixture of these various elements;
 - (b) except that, when a hyphen or dash is used to join up a whole number to a fraction or a number to a percentage sign or per thousand sign, it shall not be counted as a character even when the sender has written it on the form. The same applies to a fraction bar appearing in a group of figures or of figures and letters forming a house number in the address;

- (c) words and expressions not fulfilling the conditions laid down in Sections 40 and 41.

Indication in the Preamble of the Number of Words

- 43.** If there is a difference between the number of words reckoned according to the rules for charging and the number of actual words, a fraction must be used, the numerator indicating the number of words reckoned according to the rules for charging and the denominator the number of actual words, e.g. 21/20.

Examples of Counting

44.

Words, etc.	No. of characters	No. of words counted	
		In the address	In the text
= RP2.50 = (service indication)	—	1	—
= TF MURRAY HILL 9-1 234 („ „)	—	1	—
= TLX 20074= („ „)	—	1	—
Van de Brande	—	3	3
Van debrande	—	2	2
Vandebrande	—	1	1
Saint James Street	—	3	3
Saintjames Street	—	2	2
Saintjamesstreet	16	2	2
Saintjamesst	12	1	1
East36thstreet (exceptional case - figures in name of street)	14	1	1
UNESCO (see Section 41 , (e))	—	1	1
SN/KL384 (designation of aircraft)	8	2	2
15A (House number transmitted in address as 15/A)	—	1	1
1021A/5 (House number transmitted in the address as 1021A/5)	6	2	2
*New York	—	1	2
Newyork	—	1	1
*Frankfurt Main	—	1	2
Frankfurtmain	—	1	1
Emmingenkrso1tau	16	1	2
Brooklyn 38 Newyork	—	1	3
Brooklyn38Newyork (exceptional case - figures in name of telegraph office)	17	1	2
Queen Elizabeth (ship)	—	1	2
Queenelizabeth (ship)	—	1	1
Two hundred and thirty four	—	5	5
Twohundredandthirtyfour	23	2	2
44½ (transmitted 44-½)	5	—	1
444½ (transmitted 444-½)	6	—	2
25% (transmitted 25-0/0)	5	—	1
25%; (transmitted 25-0/00)	6	—	2
27 th	—	1	1
L10 or £10	—	—	1
3s. 6d	5	—	2

*In the address these different expressions shall be joined by the accepting officer.

Examples of Counting - *continued*

Words, etc.	No. of characters	No. of words counted	
		In the address	In the text
10s. 6d	6	—	2
11hr30	6	—	2
11•30	5	—	1
thirtythirty (instead of three thousand and thirty)	12	—	1
threepointthirty	16	—	2
Emvchf (commercial mark)	6	—	2
GHF (commercial mark)	—	—	1
G H F (separate letters)	—	—	3
GHF45	—	—	1
Tenpounds (irregular combination)	—	—	2
May/August	—	—	3
201200Z	7	—	2
5020N	5	—	1

PART 3—SPECIAL RADIOTELEGRAMS

Paid Service Indications

45. The sender must write on the form, immediately before the address, any instructions relating to the class of service (Urgent, SLT or Press) or to delivery, prepayment of reply, collation, etc. These instructions, which are called Supplementary Instructions, must be expressed in abbreviated form. Only the authorised abbreviations as given below are to be transmitted and, if necessary, the instructions written by the sender must be altered to agree with the relative authorised abbreviation.

Radiotelegram to or from the United Nations (by authorised persons only)	= Etat Priorité Nations =
Government radiotelegram with priority	= Etat Priorité =
Government radiotelegram without priority	= Etat =
Radiotelegram to be given priority over the ordinary telegraph system	= Urgent =
Radiomaritime Letter (Ship Letter Telegram)	= SLT = *
Radiomaritime Ocean Letter	= OL =
Press radiotelegram	= Presse =
Radiotelegram with reply paid	= RPx = †
Radiotelegram to be collated, i.e. repeated from office to office throughout transmission	= TC =
Radiotelegram to be delivered by post	= Poste =
Radiotelegram to be delivered by airmail	= PAV =
Radiotelegram to be delivered by registered airmail	= PAVR =
Radiotelegram to be posted as a registered letter	= PR =

*From ships only.

†Amount prepaid to be inserted in lieu of x, e.g., 15/-" or "18.90" (franc currency).

Radiotelegram for express delivery when the cost of delivery is to be collected from the addressee	= Exprès =
Radiotelegram for express delivery in the country of the coast station, when the cost of delivery is prepaid	= XP =
Radiotelegram, Greetings Telegram	= LX =
Radiotelegram not to be delivered during the night	= Jour =
Radiotelegram to be delivered during the night if received then	= Nuit =
Radiotelegram to be called for at a Telegraph Office	= TR =
Radiotelegram to be called for at a Post Office	= GP =
Radiotelegram to be called for at a Post Office (registered)	= GPR =
Radiotelegram with multiple addresses	= TMx = *
All addresses of a multiple address radio-telegram to be communicated to all addresses	= CTA =
Radiotelegram of which the date and time of transmission to the ship is to be notified by the coast station by telegraph	= PC =
Radiotelegram to be held at the disposal of the ship by the coast station or a fixed number of days	= Jx = †
Radiotelegram to be sent through an intermediary ship station.	= RM =
Radiotelegram for which delivery by Telex has been requested	= TLXx = ‡
Radiotelegram of which delivery by telephone is requested	= TFx = ‡
Radiotelegram on Official Meteorological Service	= OBS =

* Here insert number of addresses in lieu of x.

† Figure representing the number of days to be inserted in lieu of x.

‡ Telephone or Telex number to be inserted in lieu of x, e.g., = TF Passy 5074

=

These paid service indications (supplementary instructions) must be entered and signalled before the address. The double hyphens are not charged for, but they should be transmitted in the form of the break-sign.

In the case of multiple address radiotelegrams, instructions of this kind should be written in front of each address to which they apply; exceptionally the paid service indications = TC =, = URGENT = or = TM = need precede the first address only.

Urgent Radiotelegrams

46. Senders of radiotelegrams to most countries may secure priority in transmission over the ordinary telegraph system and in delivery by writing the service indication = URGENT = before the address and by paying double the amount of the ordinary telegraph charge in addition to the normal coast and ship station charges. The indication = URGENT = must also be entered as prefix and telegraphed. (This service is not available to the senders of radiotelegrams destined for places in the United Kingdom and the Irish Republic and sent through United Kingdom coast stations.)

Radiomaritime Letters (Ship Letter Telegrams)

47. A radiomaritime letter (Ship Letter Telegram) service, for non-urgent messages, is in operation through coast stations in the United Kingdom and the Irish Republic on the following conditions:
- (a) The service is available in the direction from ship to shore only.
 - (b) Ship Letter Telegrams (SLT's) should be sent after full rate traffic.
 - (c) Messages are accepted only for destinations in the United Kingdom and Irish Republic and must bear an adequate postal address. Abbreviated telegraphic addresses are inadmissible.

Coast stations cannot amend or correct incomplete postal addresses of radiomaritime letters. These are posted to the addresses furnished by the senders who are responsible for the sufficiency of addresses, as in the case of all other postal packets.

Accepting operators should enquire of senders as to the accuracy and sufficiency of the addresses when accepting the messages, adding a reminder that either inaccuracy or insufficiency of address might entail considerable delay in delivery. In the case

of SLT's for London, the postal district should be included in the address and, in the case of SLT's for provincial towns, the normal postal address should be used.

Retransmission of radiomaritime letters by ships is prohibited.

Messages are forwarded from the coast station by ordinary post.

The paid service indication = SLT = must be inserted before the address; it is counted and charged for as one word. A special form is used at coast stations; to avoid delay in taking such

traffic the indication SLT should be added to the call made to the coast station when communication is established.

The paid service indication for reply by ordinary radiotelegram = RP = is also admitted with radiomaritime letters.

As a general rule, the text is subject to the regulations applicable to letter telegrams, namely:

- (a) the text must be expressed wholly in plain language;
- (b) if asked to do so by the office of origin, the sender must sign a declaration on the telegraph form that the text is expressed in plain language and that it bears no meaning other than that which appears on the face of it. The declaration must indicate the language used;
- (c) arrangements may be made for the senders of certain types of message, such as birthday and Christmas greetings, to include an unpaid indication of the desired date of delivery. The Post Office will endeavour to arrange delivery accordingly.

The charges for this class of letter telegram from United Kingdom ships through coast stations in the United Kingdom and Irish Republic are shown in the current Notices to Ship Wireless Stations.

A similar service is available through the coast stations of certain other countries for delivery within those countries; the conditions of acceptance and the charges are shown in the List of Coast Stations.

Press Radiotelegrams

- 48.** In the direction ship to shore, press radiotelegrams are accepted for destinations in most countries. Such radiotelegrams must conform to the following conditions:

- (a) the text must consist of information and news for publication in newspapers and other periodical publications or for radio or television broadcasting, and comments relative to the publication or broadcasting of such matter

provided that such comments are placed between brackets at the beginning or at the end of the text. The number of words (excluding the brackets) thus added to the text must not exceed 10% of the total number of chargeable words in the text and must not exceed twenty. The comments and the brackets are charged at the same rate as the text;

- (b) they bear, at the beginning of the address, the paid service indication = PRESSE = written by the sender;
- (c) they must be written in plain language in one of the languages admitted for international telegraph correspondence in plain language, chosen from among the following languages:
 - (i) the French language;
 - (ii) the language of the newspaper, periodical publication or news agency bulletin to which the radiotelegram is addressed or the language in which the radio or broadcast is carried out;
 - (iii) the national language or languages of the country of the ship of origin or the country of destination, designated by the administrations concerned;
 - (iv) one or more additional languages which may be designated by the administration of origin or the administration of destination as being used in their territories.

These languages may be used for quotations together with the language in which the radiotelegram is written;

- (d) subject to the exception provided in (a) above, they must not contain any passage, announcement or communication having the character of private correspondence, nor any advertisement or communication for insertion in any publication, for radio broadcasting or for televising whether or not a charge is made;
- (e) they may be addressed only to newspapers or periodical publications, to news agencies or bureaux, to press services of diplomatic missions or to authorised radio sound or television broadcasting companies, organisations or stations and not to the name of a person connected in any capacity whatever with any of these entities;
- (f) administrations or recognised private operating agencies may require that press telegrams shall be accepted only from authorised representatives of newspapers, periodical publications, news agencies or bureaux, or press services

of diplomatic missions, authorised radio sound or television broadcasting companies, organisations or stations. Administrations or recognised private operating agencies may require the sender of a press telegram to be registered as the accredited correspondent of the addressee and may issue cards of identification without which the radio-telegram need not be accorded press rates.

Stock exchange and market quotations, results of sporting events and meteorological observations and forecasts, with or without explanatory text, are admitted in press telegrams.

The only special services allowed are:

urgent, multiple addresses, communicate to all addresses, if these services are admitted by the countries of origin or destination. The corresponding paid service indications (= URGENT =, = TMx =, = CTA =) are charged for at the reduced rate. In multiple address press telegrams all addresses must fulfil the conditions of (e) above.

Prepaid Replies

49. The sender of a radiotelegram may prepay a reply up to any value by writing the paid service indication = RP = followed by the amount prepaid, expressed in British currency in shillings and pence (e.g. = RP29/6 =) if the radiotelegram is:

- (a) exchanged between two United Kingdom ships; or
- (b) sent from a United Kingdom ship to any destination through a coast station in the United Kingdom or the Irish Republic.

In other cases the amount prepaid should be shown in gold franc currency (e.g. = RP3.05 =).

If the sender wishes to prepay replies to a multiple address radiotelegram he must write = RP = before the address of each addressee whose reply he prepays.

In the case of a radiotelegram from a ship to a telegraph office on land to which a reply has been prepaid, the reply voucher issued to the addressee by the delivery office will be accepted, during a period of three months following the date of issue, at any office of the country of destination in payment or part payment of a telegram or radiotelegram.

When a radiotelegram to which a reply has been prepaid is received on board ship, a reply voucher, showing the date of issue, must be completed and delivered with the radiotelegram.

The reply voucher issued on board gives the right to send, up to the limit of its value and within a period of three months, a

Radiotelegram to any address whatever from the ship station which has issued the voucher.

A reply must not be accepted without payment unless a pre-paid reply voucher is tendered in payment or part payment. If the reply costs more than the value of the voucher tendered, the sender of the reply must pay the balance.

Radiotelegrams to be Collated

50. The sender of a radiotelegram may have it collated, i.e. repeated at each station or office during transmission, by paying in addition to the normal charge half as much again.

Stations and offices receiving a "collated" telegram must immediately repeat it back to the station or office from which it was received. Upon receipt of the repetition, stations and offices must compare it with the copy from which transmission was made and take steps to correct any error which may have arisen. No copy of the repetition should be given to the sender of the message.

The paid service indication = TC = indicating collation, is charged for as one word.

EXAMPLE: = TC = LORENZINI POGGIOVALLE
TERAMO

Radiotelegrams to be Delivered by Special Means

51. (1) The sender may give instructions for his radiotelegram to be posted to its destination from a telegraph office situated in the country of destination, as for example when the locality of destination is not served by telegraph. Exceptionally, when addressed to a locality not served by international telecommunication channels or when the locality cannot be reached by the telecommunication system of the country of destination, delivery may be effected by this means from a telegraph office of another country. When the radiotelegram is to be forwarded in this way no fee is charged for postage. In either case the paid service indication = Poste =, which is counted and charged for as one word, should be inserted before the address. For example, the address of a radiotelegram to be forwarded by post from Teramo to Poggiovalle, a locality not served by telegraph, should be worded in the following manner:

"= POSTE = LORENZINI POGGIOVALLE TERAMO"

The name of the terminal telegraph office should always be written last in the address. Radiotelegrams may also be posted

as registered letters, or by airmail or registered airmail, by inserting the appropriate service indication.

Supplementary charges must be prepaid; the appropriate charges should be ascertained from the coast station through which the radiotelegram is sent.

(2) If a quicker means than the post is to be used the portage is, as a rule, recovered from the addressee, and the address must then be worded as in the following example:

"EXPRES = LORENZINI POGGIOVALLE TERAMO".

The paid service indication "Exprès" (denoting portage) is charged as one word.

If the portage charge is notified in the Official List of Telegraph Offices against the office of destination, the sender may pay the relative amount, and in that case the paid service indication = XP = must be inserted before the address.

This service is not available to addresses in the United Kingdom.

(3) If the addressee is connected by telephone with the office of destination a sender may give instructions for his radiotelegram to be delivered by telephone. In this case he must write before the address the paid service indication = TF . . . =, completed by the telephone number of the addressee, the whole expression counting as one word, e.g.

= TF 873455 = SCHUTZ HAMBURG = (counts three words);

= TF PASSAY 5074 = PAULI PARIS = (counts three words);

= TF MURRAY HILL 9-1234 = JOHN JONES NEW-YORK = (counts four words).

Such radiotelegrams are, whenever possible, transmitted to the addressee by telephone unless this is contrary to the regulations of the administration of the country of destination or the addressee has expressly requested that his telegram should not be delivered to him by telephone.

(4) Similarly, if the addressee is connected to the office of destination by Telex, the sender may give instructions for his radiotelegram to be delivered by Telex. In this case he must write before the address the paid service indication = TLX . . . = completed by the telex number of the addressee, the whole expression counting as one word, e.g., = TLX 20074 = Pauli Paris = (counts three words).

(5) As an exception to (3) above, and exclusively when the radiotelegram is sent through a coast station in the United

Kingdom and destined for a place in the United Kingdom or Irish Republic, the address may be written in the form "Jones Midland 245 Birmingham". (The total number of chargeable words is three, made up of: one word for the name of the addressee; two words for the name of the exchange, the number, and where necessary, the name of the town).

Radiotelegrams to be Called for

52. In the case of a radiotelegram which is intended to be left at a telegraph office or post office until called for, the paid service indication = TR =, = GP = or = GPR = must be inserted before the address.

Multiple Addresses

53. Radiotelegrams from ships to most countries may be addressed to several persons in the same town, or to the same person in different parts of the same town, in which case the paid service indication = TM . . . = (the number of addresses being inserted) must be included before the name of the first addressee. This indication is counted and charged as one word. In addition a fee for the preparation of each copy must be prepaid. (See current Notices to Ship Wireless Stations for charges to addresses in the United Kingdom and Irish Republic.)

EXAMPLE: = TM2 = THORUM, SALVAGE, BRISTOL

If the sender desires that all the addresses should appear on each of the copies to be delivered to the addressees, he must write the paid service indication = CTA = (meaning "com-municate to all addresses") in the supplementary instructions before the first address. This indication is charged for as one word.

Multiple address radiotelegrams may also be sent to several persons on board the same ship under similar conditions.

Radiotelegrams to be Held at a Coast Station for a Fixed Number of Days

54. The sender of a radiotelegram to a ship at sea may specify the number of days during which the coast station may hold the radiotelegram by writing before the address the paid service indication = Jx = (x days) specifying the number of days (ten at the most) exclusive of the day of handing-in of the radio-telegram. When it has not been possible for a coast station to transmit to a ship station

- (a) a radiotelegram bearing the paid service indication = Jx = within the prescribed period, or
- (b) a radiotelegram not bearing this service indication within a period of three days following the date of handing-in,

the coast station informs the office of origin, which notifies the sender. The latter may ask, by paid service advice, addressed to the coast station, either that his telegram be cancelled as regards the section between the coast station and the ship station or that further attempts at transmitting it to the ship station be made during a period of another seven days at the most. Failing such a request, the radiotelegram is treated as undelivered by the coast station three days after the despatch of the advice of non-transmission. The office of origin must be advised immediately if the coast station transmits the radio-telegram during the last mentioned period of three days. The same applies if the coast station transmits the radiotelegram during the additional period which may have been requested by the sender.

On the morning of the day following that on which a radio-telegram is treated as undelivered, the coast station advises the office of origin in order that the coast and ship station charges and the charges for the special services not performed may be refunded to the sender.

The lapse of any of the periods mentioned in (a) and (b) above is ignored if the coast station is sure that the ship station will soon come within its service area.

On the other hand, the lapse of these periods is not awaited when the coast station is sure that the ship station, being in the course of a voyage either has definitely left its service area or will not enter it. If it believes that no other coast station of the administration or of the private enterprise to which it is subject is or will be in touch with the ship, the coast station cancels the radiotelegram as far as concerns the section between itself and the ship station and informs the office of origin which notifies the sender. In the contrary case, the coast station forwards the radio-telegram to the coast station believed to be in touch with the ship station, provided, however, that no additional charge results therefrom.

The coast station which carries out the redirection by wire, alters the address of the radiotelegram by placing after the name of the ship station that of the new coast station charged with the transmission and inserting at the end of the preamble the service instruction "redirected from x Radio" which must be transmitted throughout the course of the radiotelegram.

If within the limits of the requisite period of retention of radiotelegrams, the coast station which has redirected a radiotelegram to another coast station is subsequently in a position to transmit the radiotelegram direct to the ship station of destination, it does so by inserting the service instruction “ampli-ation” before the preamble. It then transmits to the coast station to which the radiotelegram has been redirected a service message informing the latter of the transmission of the radio-telegram.

When a radiotelegram cannot be transmitted to a ship station owing to the arrival of the ship in a port near the coast station, the latter may, according to circumstances, forward the radio-telegram to the ship station by other means of communication, at the same time informing the office of origin by service message of the delivery. In this case the coast station charge is retained by the administration to which the coast station is subject and the ship charge is refunded to the sender by the administration to which the office of origin is subject.

De-Luxe (Greetings) Radiotelegrams

55. De-Luxe (Greetings) radiotelegrams may be sent by ship stations for delivery to addresses in the United Kingdom. At the delivery office such radiotelegrams are written on a standard greetings telegram form and delivered in a decorated envelope. They may be sent to telephonic addresses in the United Kingdom on the understanding that they will be delivered by telephone and a confirmatory copy on the standard greetings telegram form posted to the addressee.

De-Luxe radiotelegrams may also be sent to addresses in certain other countries, but not to telephonic addresses.

The charge for de-luxe radiotelegrams is the normal radio-telegram charge to the country concerned. The paid service indication = LX = should be inserted before the address and charged for as one word.

Ocean Letters and Poste Radios

OCEAN LETTER

56. (1) An Ocean Letter is a message sent direct from one ship to another ship passing in the opposite direction for delivery by post from a port of call of the receiving ship.

The paid service indication for an Ocean Letter is = OL =.

Ocean Letters must be written in plain language; any language declared as plain language under the International Telegraph Regulations is permissible.

Such messages must bear a full postal address. Registered telegraph addresses are not permitted.

Every word in the address, text and signature is counted for the purpose of charge.

Current rates of charge are issued by the controlling private enterprises authorised to use this service.

POSTE RADIO

(2) A Poste Radio is a message sent direct from one ship to another ship steaming in any direction for delivery by post from a port of call of the receiving ship.

The normal rate for a Poste Radio comprises the notified ship charges (per word) for radiotelegraph transmission and reception between the ship of origin and the receiving ship, plus the necessary fee for postage by ordinary post or by airmail, as the case may be, from the receiving ship's port of call to the required destination.

The paid service indication for a Poste Radio for delivery by ordinary mail is =Poste = ; if for delivery by air mail = PAV =, the indicator letters being counted and charged as one word.

The method of addressing a Poste Radio is as follows:

- (a) the indicator = Poste = or = PAV=;
- (b) the name of the posting port;
- (c) name and address of the addressee;
- (d) name of the posting ship.

EXAMPLE: = POSTE = SOUTHAMPTON J. BROWN 123
WASBURN STREET DOVER MAURETANIA

RESTRICTIONS

(3) Ocean Letters and Poste Radios for delivery in the United Kingdom and Irish Republic from crews of ships on their personal affairs are permitted from United Kingdom ships whose controlling companies have been authorised by the Postmaster General to use this service, subject to the condition that such traffic must not be handled within 250 miles of a United Kingdom or Irish Republic coast station. Masters' service messages on ships' business are not admitted.

Ocean Letters and Poste Radios from passengers for destinations abroad are permitted for countries which admit such services, subject to the conditions that such traffic must not be exchanged within 250 miles of a United Kingdom or Irish Republic coast station.

Ocean Letters and Poste Radios from passengers for delivery in the United Kingdom and Irish Republic are prohibited no

matter where posted, either at home or abroad: they may not be sent to foreign ships for posting in this or any other country for delivery in the United Kingdom or Irish Republic.

The retransmission of Ocean Letters and Poste Radios is prohibited.

Retransmission of Radiotelegrams

RETRANSMISSION AT THE REQUEST OF THE SENDER

57. (1) Ship stations must, if the sender so requests, serve as intermediaries for the exchange of radiotelegrams originating in or destined for other stations of the mobile service; the number of intermediary ship stations is, however, limited to two.

Radiotelegrams so forwarded must bear before the address the paid service indication = RM = (retransmission).

The transit charge, whether two intermediary ship stations are concerned or only one, is fixed uniformly at forty centimes (0r.40) per word with the collection of a minimum charge for seven words. When two ship stations have participated this charge is divided equally between them.

ROUTINE RETRANSMISSION

- (2) When a coast station cannot reach the ship station for which a radiotelegram is destined and no payment for retransmission of the radiotelegram has been deposited by the sender, the coast station may, in order to forward the radiotelegram to its destination, have recourse to the help of another ship station provided that the latter consents. The radiotelegram is then transmitted to this other ship station. The help of the latter is given free of charge.

The same provision is also applicable to traffic from ship stations to coast stations when necessary.

The station assisting in the free retransmission must enter the service abbreviation QSP via . . . (followed by the name of the ship station) in the preamble of the radiotelegram.

In order that a radiotelegram thus forwarded may be considered as having reached its destination, the station which has made use of this indirect route must have obtained the regular acknowledgment of receipt, either direct or by an indirect route, from the ship station for which the radiotelegram was destined or from the coast station to which it was to be forwarded, as the case may be.

RETRANSMISSION BY A COAST STATION

- (3) When a single coast station is used as an intermediary between ship stations, only one coast station charge is collected. If the

coast station charge applicable to traffic with the ship station of origin is different from that applicable to traffic with the ship station of destination, the higher of these two charges is collected. In addition, a land telegraph charge may be collected equal to that applicable to transmission over the telecommunication network.

When, at the request of the sender, two coast stations are used as intermediaries between two ship stations, the coast station charge of each station is collected and also the telegraph charge for the section between the two stations.

Correction of, or Enquiry Concerning Radiotelegrams

- 58.** The **sender** of a radiotelegram or his authorised representative may have instructions given respecting it by telegraph. Any message exchanged between two stations at the request of the sender must be in the form of a paid service advice and should be prefixed ST. The text of the paid service advice conveying the request is charged for at the ordinary rate with a minimum charge as for seven words and, if a reply by telegraph is required, the paid service indication = RPx = must be used and a charge for a reply of seven words must be collected. The name of the ship or office of destination and the name of the ship of origin (which is used as the name of the sender) are not charged for.

Any request for the correction of a radiotelegram should be sent, so far as practicable, to the coast station to which the message was transmitted.

Corrections should be drawn up as follows:

(a) CORRECTION OF TEXT

Form to be used when the sender of a radiotelegram from a ship discovers that he has made an error in the original radiotelegram:

ST DEWSBURY DE ABCD 6 8 16 1015 =

2 FIFTEENTH SMITH REPLACE THIRD 20 by 2000

(chargeable as eight words).

In this example "6" denotes the local serial number of the ST advice, "8" the number of words, "6" the day of the month on which the service is sent, "1015" the time of handing-in, "2" the serial number of the original radiotelegram, "fifteenth" its date, "Smith" the name of the addressee, and "third" the position in the text of the original message of the word which the sender desires to correct, and similarly in the other examples which follow.

(b) CORRECTION OF ADDRESS

Form to be used when the sender wishes to correct or complete the address of an undelivered radiotelegram from a ship:

ST DEWSBURY DE ABCD 16 1015 =

2 FIFTEENTH SMITH DELIVER 36 YORKSTREET

(chargeable as seven words).

(2) The **addressee** of a radiotelegram may, with the object of rectifying errors, have it repeated in whole or in part. Repetition is obtained from the office of origin whenever practicable; when this cannot be done, repetition is given by the coast station from its records. Messages exchanged between two stations at the request of the addressee are regarded as ordinary service advices and should be prefixed "A" No charge is made for this service through United Kingdom coast stations.

Similar requests made through the coast stations of other countries may be subject to a charge.

Cancellation of Radiotelegrams

59. A radiotelegram may be cancelled by the sender after it has been accepted for transmission.

If the transmission of the radiotelegram to the next office or station has been completed, the sender may request its cancellation only by means of a paid service advice (ST) addressed to the office of destination. This paid service advice is charged at the ordinary rate for the text and the indication = RPx = and, in addition, there is a charge as for seven words at the ordinary rate for the reply; the address is not charged for.

EXAMPLE:

ST DEWSBURY DE ABCD 8 5 16 1015

= RPx = 2 FIFTEENTH SMITH CANCEL

(Total charge as for fourteen words, i.e. the minimum charge as for seven words for the ST and seven words for the prepaid reply.)

If the radiotelegram has been delivered the addressee will be informed of the cancellation unless instructions to the contrary have been included in the paid service advice.

EXAMPLE OF REPLY:

RST ABCD DE DEWSBURY 4 4 16 1230 = 8 SIXTEENTH
SMITH CANCELLED

or

RST ABCD DE DEWSBURY 4 7 16 1230 =
8 SIXTEENTH SMITH ALREADY DELIVERED
ADDRESSEE INFORMED

(8 is the serial number of the original paid service advice.)

Undelivered Radiotelegrams

- 60.** When, for any reason, a radiotelegram originating in a ship station and destined for a place on land cannot be delivered to the addressee, an advice of non-delivery is addressed to the coast station which received the radiotelegram. After checking the address, the coast station forwards the advice, when possible, to the ship station, if necessary, by way of another coast station of the same country or of a neighbouring country, as far as existing conditions or special agreements permit.

On receiving a notice of non-delivery from a coast station, the ship station operator should compare the address quoted in the notice with that on the form handed in by the sender and, if possible, correct any errors by means of a service advice transmitted by way of the original coast station or another coast station of the same or a neighbouring country, in so far as existing conditions or special agreements permit. Should no error be disclosed the sender is informed of the non-delivery of his message and the reason. A sender desiring to alter or add to the address of a radiotelegram can only do so by means of a paid service advice (see Section 58).

When a radiotelegram received at a ship station cannot be delivered, that station informs the office or ship station of origin by a service advice. In the case of a radiotelegram originating on land, this service advice is sent, whenever possible, to the coast station through which the radiotelegram passed or, if necessary, to another coast station of the same country or of a neighbouring country, so far as existing conditions or special agreements permit.

Difficulty is occasionally experienced in tracing relative radiotelegram forms owing to inadequate particulars being furnished when non-delivery advices are sent through United Kingdom coast stations.

Ships' operators are reminded that:

- (a) non-delivery advices, whether passed direct to coast stations or through intermediate ships, should contain in the text the full particulars given in Section 62 (1);
- (b) the date on which the radiotelegram was handed in should be given as a word;
- (c) a separate service message should be sent for each undelivered radiotelegram.

The date given in the particulars of the non-delivery advice should always be that on which the radiotelegram was handed in and not that on which it was received from the coast station or intermediate ship.

Service Advices

- 61.** The preamble of a service advice consists of: (a) the prefix A (b) the names of the offices or the call signs of ship stations of destination and origin, with "e" between them; c) the number of the service message (whether a local serial number or an international number); (d) the date and time of handing-in.

A service advice has no address or signature, the preamble giving the necessary indication of the offices or ship stations of destination and origin.

In the text of a service advice exchanged between a ship and a coast station the radiotelegram to which it relates is designated by (i) its serial number (local or international); (ii) the date on which it was handed in (to be written entirely in words); and (iii) the name of the addressee (together with the full address in cases of non-delivery). Then follows the communication.

Specimen Service Advices

- 62.** (1) Ship station advises office of origin of non-delivery of radiotelegram:

A WREXHAM DE ABCD 15 23 1100 =
14 TWENTYSECOND WILLIAMS . . . (insert name of ship)
ADDRESSEE NOT ON BOARD.

Here "Wrexham" is the office for which the service advice is intended; ABCD the call sign of the ship; 15 the local serial number of the service advice; 23 the day of the month on which the service advice is sent; 1100 the time of handing-in; 14 the local serial number of the original radiotelegram; "twenty-second" the day of the month on which the original radio-

telegram was handed in; “Williams” the name of the addressee; “addressee not on board” the reason for non-delivery.

Other common reasons for non-delivery on board ship are usually indicated as follows:

addressee no longer on board; addressee unknown; refused.

(See (4) below for the procedure of the coast station in forwarding this service advice to its destination.)

(2) Coast station, having been advised by office of destination of non-delivery of radiotelegram from a ship, transmits this advice to ship station:

A ABCD DE WREXHAM 29 11 1230 =
15 TENTH JONES 58 SOUTH ST WREXHAM
ADDRESSEE UNKNOWN.

Other common reasons for non-delivery are usually indicated as follows:

addressee left; addressee deceased; addressee not arrived;
address not registered; address no longer registered; refused.

(3) Ship station, having received advice of non-delivery, informs the office of origin of the service advice of a discrepancy in the address:

A WREXHAM DE ABCD 5 11 1630 =
15 TENTH READ JONES 38 SOUTH ST WREXHAM
REPEAT 38.

This indicates that there has been an error in the number, and the word (or group of words or figures) in which the error occurred is repeated, the word “repeat” being prefixed. If the error had been, e.g. the substitution of Street for Place, the text of the foregoing service advice would have read: “15 TENTH READ JONES 58 SOUTH PLACE WREXHAM REPEAT PLACE”.

(4) A coast station, in forwarding to the office of destination a service advice received from a ship, should translate it into the form usual in inland service messages, the original radiotelegram being designated not by its number in the radiotelegraphic transmission but by the time of handing-in at the office of origin in the inland telegraph system. Similarly, the ordinary inland form of service message should be used by the coast station in informing the office of origin that the ship for which a radio-telegram was intended has passed out of range, or has not signalled its presence. The phrases to be used in these cases are “ship out of range” and “ship not signalled” respectively.

If necessary, the service message forwarded by the coast station will be translated into French at a later stage.

French Equivalents of Common Expressions

- 63.** A United Kingdom ship or coast station, in sending a service message to a station which does not habitually communicate in English, should use French terms in the text so far as possible. French equivalents of some of the commonest words and phrases are given below:

ENGLISH	FRENCH
Addressee	Destinataire
Unknown	Inconnu
Left	Parti
Not on board	Pas à bord
No longer on board	Plus à bord
Deceased	Décédé
Address	Adresse
Not registered	Pas enregistrée
No longer registered	Plus enregistrée
Refused	Refusé
For	Pour
Repeat	Répétez
Already	Déjà
Delivered	Remis
Deliver	Remettez
Cancel	Annulez
Replace	Remplacez
Read	Lisez
Reply paid	Réponse payée
Radiotelegram to be repeated	Collationnement
Posted as a registered letter	Poste recommandée
Charge for portorage prepaid	Exprès payé
Radiotelegram to be called for at a Telegraph Office	Telegraphe Restant
Radiotelegram to be called for at a Post Office	Poste Restante
Radiotelegram with multiple addresses	—addresses
All addresses of a multiple address radiotelegram to be communicated to addressee	Communiquer toute adresses
Radiotelegram to be given priority (as "Urgent")	Urgent

PART 4—CHARGES, REIMBURSEMENTS AND ACCOUNTING FOR RADIOTELEGRAMS

Components of Charges

64. (1) The charge for a radiotelegram must in every case be prepaid by the sender. The same rate of charge applies whether the radiotelegram is written in plain language, secret language, or a combination of both.

(2) For a radiotelegram exchanged between a **ship and a telegraph office on land** the charge comprises:

- (a) the ship station charge;
- (b) the coast station charge;
- (c) the charge for ordinary telegraph transmission;
- (d) the special charges, if any, mentioned in Part 3;
- (e) one additional ship station charge if retransmission by a ship station (or stations) is involved)

The coast station charge, the ship station charge and the ordinary telegraph charge are fixed on the basis of a word rate; for each full-rate radiotelegram, however, a minimum charge for seven words is made.

(3) The charge for a radiotelegram exchanged **between two ships** consists of:

If sent via coast stations:

- (a) the ship charge of the ship of origin;
- (b) **one** coast station charge for **each** coast station;
- (c) the ship station charge of the ship of destination;
- (d) the ordinary telegraph transmission charge;
- (e) the special charges, if any, mentioned in Part 3.
- (f) one additional ship station charge if retransmission by a ship station (or stations) is requested by the sender.

When a single coast station is employed as an intermediary between ship stations, and the coast station charge applicable to traffic with the ship station of origin is different from that applicable to traffic with the ship station of destination, the higher of these two charges is collected.

If sent direct (i.e. not via a coast station): the charges at (a), (c), (e) and (f) apply.

The retransmission charge, whether by two intermediary ship stations or only one is 0.40 gold franc per word, with the collection of a minimum charge for seven words.

Coast and Ship Station Charges

- 65.** The coast station charge may be ascertained from the List of Coast Stations; the ship station charge from the List of Ship Stations.

Charges for Press Radiotelegrams

- 66.** The charges for press radiotelegrams are as follows:

- (a) Ordinary press radiotelegrams:

Ship station charge: one-half of the ship station charge for an ordinary radiotelegram;

Coast station charge: one-half of the coast station charge for an ordinary radiotelegram;

Telegraph charge: (i) one-half of the telegraph charge for an ordinary radiotelegram if either transmitted solely over the European system or to a destination in the country of the coast station;
(ii) one-third of the telegraph charge for an ordinary radiotelegram in other cases.

- (b) Urgent press radiotelegrams:

Ship station charge: one-half of the ship station charge for an ordinary radiotelegram;

Coast station charge: one-half of the coast station charge for an ordinary radiotelegram;

Telegraph charge: the same as the telegraph charge for an ordinary radiotelegram over the same route.

- (c) The minimum number of chargeable words for press radiotelegrams is fourteen.

Charges for Ordinary Telegraph Transmission

- 67.** Ship stations are required to carry the telegraph tariffs of the countries for which they most frequently accept radiotelegrams (see Appendix 7). The List of Coast Stations includes for certain countries details of the inland rates and rates of transmission to adjacent countries.

Where the ship's operator has not the means of calculating the charge for a radiotelegram, he may apply to the coast station for information, the enquiry and reply being recorded on service message forms.

No new rate and no modification, either general or of detail, relative to the tariff shall be effective for countries other than those which establish the new rate or rate modification until fifteen days after its notification by the Secretary General, excluding the day of despatch, and it shall not be applied until the first of the month following the expiration of this period.

If there are several notifications, the date of the first only is to be considered in reckoning the interval.

The interval of fifteen days shall be reduced to ten days for modifications intended to equalise rates with those already notified for competing routes.

Receipts

- 68.** A receipt for the charges prepaid may be given on demand, free of charge.

Accounts

- 69.** The method of accounting for charges is arranged between the Postmaster General and the Licensee or the private enterprise operating each coast or ship station licensed by him.

Conditions under which Reimbursement may be Claimed

- 70.** The charges for radiotelegrams incorrectly transmitted, unduly delayed, or not delivered to the addressee, will be refunded, wholly or in part, under certain conditions. The following are the principal cases in which reimbursement may be claimed:

- (a) When a radiotelegram has failed to reach its destination through some error on the part of the telegraph or radiotelegraph service, the whole of the amount paid will be refunded.
- (b) When a radiotelegram is delayed through the fault of the telegraph service, the whole of the charge will be refunded

if delivery to the addressee is not made until after a period of:

- (i) six hours in the case of a telegram exchanged between two countries of Europe either adjacent or connected by a direct channel of communication;
- (ii) twelve hours in the case of a telegram exchanged between two other countries in Europe, including territories included in the European system, or between two countries outside Europe which are either adjacent or connected by a direct channel of communication;
- (iii) twelve hours in the case of a full rate telegram or a press telegram exchanged over a direct communication channel between a country in Europe and a country outside Europe;
- (iv) twenty-four hours in all other cases.

The time during which offices are closed, when that is the cause of delay, the time of night if the radiotelegrams do not bear the paid service indication = Nuit = or if they bear the paid service indication = Jour =, the time taken for maritime transmission, and also the period of retention at a coast station, or on board a ship station, shall not be reckoned in the periods indicated above.

Where, however, the delay in any case is attributable to indistinct writing by the sender the telegraph service shall be deemed not to be at fault and no part of the charge will be refunded.

- (c) The whole of the charge for a radiotelegram will be refunded in cases of errors in transmission or omission of words regarding which the Administration of origin is satisfied that the meaning of a plain language radiotelegram has been altered, or rendered unintelligible.
- (d) In cases of errors in transmission or omission of words regarding which the Administration of origin is satisfied that a part of the text of a collated radiotelegram in secret language or of a radiotelegram in plain language has been unable to fulfil its purpose, the charge for this part of the text will be refunded unless the error or omission has been rectified by means of a service advice (paid or unpaid).
- (e) When a reply paid voucher has not been used the amount paid for the reply will be refunded to the sender provided

that the addressee returns the reply paid form to the Telegraph Administration of the country in which it was issued, or to the Company controlling the radio installation on the ship on which it was issued, as the case may be, within a period of four months following the date of issue of the voucher, and accompanied by a request that the money be refunded to the sender.

- (f) If the reply is not of the value of the amount prepaid, the balance of the charges will be refunded to the sender, on application within four months of the date of issue of the reply form provided that this sum is not less than 4s. 8d.
- (g) When the original radiotelegram has not been delivered, the amount deposited for the reply will be refunded to the sender.
- (h) When a special paid service has not been rendered as in the case of a = TC = telegram not repeated, the charge collected in respect thereof will be refunded.
- (i) When a radiotelegram has been cancelled at the station or office of origin before transmission to the next station or office has begun or before such transmission has been completed the charge will be refunded. If the radiotelegram is cancelled after its transmission to the next station or office but before it has reached the ship or office of destination, any balance of charges will be refunded.

Applications for Reimbursement to be Made in Writing

- 71.** The information in Section 71 is given in order that operators may be in a position to advise senders of radiotelegrams who make enquiries or complaints. It is not intended that an operator should himself refund the amount prepaid on a radiotelegram, or any part of it, except in cases where the operator on the ship of origin has not transmitted the radiotelegram.

When a radiotelegram cannot be transmitted by a coast station to the ship of destination, the amount paid by the sender in respect of coast and ship charges will be refunded without application. In all other cases applicants for the return of money should be told to apply in writing to the company responsible for the ship station. They should also be informed that claims for reimbursement should always be accompanied by documentary evidence, viz:

- (a) in the case of non-delivery or delay, by a written statement from the office of destination or the addressee that

the radiotelegram has not been received, or has been delayed.

- (b) in the case of error in a plain language radiotelegram, or in the case of the omission of one or more words, by the actual message form delivered to the addressee.

No claim for reimbursement will be entertained unless it is made within four months of the date of the original radiotelegram.

Reimbursement for Consequential and Correct Telegrams

- 72. The amount paid in respect of radiotelegrams or ordinary telegrams sent in consequence of the non-delivery, delay, or incorrect transmission of a radiotelegram will not normally be returned.

PART 5—RADIOTELEPHONE CALLS

General

73. Radiotelephone services are available between suitably equipped ships and telephone subscribers on shore via coast radio stations. Radiotelephone calls may be extended over the international telephone network to certain countries other than that in which the coast station is situated.

Particulars of the services available are published in the List of Coast Stations.

The instructions which follow are those which apply in the international telephone service. Particular services may be subject to special restrictions or conditions applied by individual administrations.

The following supplementary services are available if admitted by the administration of the country concerned:

- (a) *préavis* (personal) calls;
- (b) *avis d'appel* calls;
- (b) collect (transferred charge) calls.

The object of a *préavis* (personal) is to endeavour to guarantee to the caller that he will be put through only if it is possible to establish communication with a person specified by name or in some other way (e.g. with a person speaking a specified language), with an acceptable substitute, or with a particular extension.

An *avis d'appel* call is one for which the booking included a notification to summon a correspondent for the purpose of making a call. Such calls are not admitted to or via the United Kingdom.

A collect (transferred charge) call is a call for which the caller, when booking the call, specifies that he wishes the charge to be paid by the person called. Such calls are admitted only if accepted by the administration of the country concerned and permitted by the operating agency of the ship station.

Priority of Radiotelephone Calls

74. Radiotelephone calls are subject to the priority of communications indicated in Section 20.

Booking of Calls

75. Normally calls are booked by designating the exchange name, or routing code for the incoming network, and the telephone number. However, booking may include only the name and address of the called person or such information as may be required to identify him.

Period of Validity of Bookings

76. The validity of call bookings recorded for a particular day and not completed expires:
- (a) When all the exchanges concerned maintain a continuous service:
 - (i) at midnight, if the call was booked before 10.0 p.m. that day;
 - (ii) at 8.0 a.m. if the call was booked after 10.0 p.m. the previous evening.
 - (b) When all the exchanges concerned do not maintain a twenty-four hour service: at the time when the daily service closes.

However, the validity of a *préavis* call booking may be extended by twenty-four hours at the request of the caller; this extension of validity takes effect as from the time when the validity would have expired in accordance with (i) and (ii) above.

An *avis d'appel* call booking remains valid for the whole of the day following that on which the booking was made.

Nevertheless, in certain cases, and especially in the inter-continental service, the call booking remains valid until it has been satisfied or refused by the person called, or cancelled by the caller.

Cancellation of Calls

77. (1) A caller may cancel his call booking without charge:
- (a) if he has not yet been advised that the call is about to be set up;
 - (b) even if, after having been advised that the call is about to be set up, he is informed that the called number is engaged or cannot be reached.

(2) If, however, the booking is for a préavis, avis d'appel or collect call, then the supplementary charge appropriate to the type of call is collected:

(a) if, at the moment of cancellation, the originating international exchange has already passed over the inter-national circuit the préavis, avis d'appel or collect call details;

(b) if the called subscriber's line is referred to the absent subscriber's service, but the caller refuses to have the call put through to that service.

In the case of a booking of an avis d'appel call, if the caller wishes the called person to be informed at his address of the cancellation, a further supplementary charge in respect of an avis d'appel is collected, together with the express charge when appropriate.

If, in the case of a booking of an avis d'appel call with express charge paid, the messenger has not already left at the time of receipt of the notice of cancellation at the (called) local exchange from which the avis d'appel is distributed, the express charge is not collected.

If, for any reason, the delivery of an avis d'appel cannot be effected, the caller is informed and the booking is officially cancelled.

PART 6—CHARGES FOR RADIOTELEPHONE CALLS

General

- 78.** (1) The charge for a radiotelephone call originating in, or intended for, a ship station, comprises:
- (a) the ship station charge;
 - (b) the coast station charge;
 - (c) the land-line charge; and
 - (d) the charge for any supplementary service.

The charge for a radiotelephone call is fixed on a time basis. Calls of a duration of three minutes or less are charged as for three minutes. In the case of calls whose duration exceeds three minutes, a charge per minute is made for the period in excess of three minutes, any fraction of a minute being charged as for one minute. The charge per minute is one-third of the charge for three minutes.

The ship station charged is published in the List of Ship Stations.

When a single coast station is used as an intermediary for a radiotelephone call between two ship stations, only one coast station charge is collected. If the coast station charge applicable to traffic with the ship station booking the radiotelephone call is different from that applicable to traffic with the ship station called, the higher of these two charges is collected.

When, at the request of the person booking the radiotelephone call, two coast stations are used as intermediaries for a radiotelephone call between two ship stations, the appropriate coast station charge of each station is collected and also the land-line charge between the two coast stations.

When handled through a coast station the chargeable duration of a radiotelephone call will be fixed at the end of the call by the coast station; if two coast stations are participating in the handling of the call, the duration of the call is fixed by that coast station which has accepted the call from the ship.

The chargeable duration of a radiotelephone call between two ship stations in direct communication with each other will be fixed by the ship station in which the call originates.

When, through any fault of the service, the booking of a radiotelephone call is not followed by the calling and called stations being placed in communication, no charge shall be payable.

When, through any fault of the service, the correspondents experience difficulty in the course of the radiotelephone conversation, the chargeable duration of the call shall be reduced to the total time during which speech conditions have been satisfactory.

When, after onward transmission of the booking particulars of a radiotelephone call, it is cancelled at the request of the person booking the call, or when a correspondent refuses to accept a call, or when the caller does not answer the call though his station is not engaged, or when the caller has become unavailable, a report charge will be collected. This charge will be not more than one-third of the charge for an ordinary radiotelephone call of three minutes' duration between the two stations concerned.

The total charge for a radiotelephone call is collected from the calling station with the exception of collect calls (if collect calls are admitted). For collect calls, the charge shall be payable by the called subscriber.

Ship stations must be acquainted with the tariffs applicable to radiotelephone calls. However, they are authorised, where necessary, to obtain such information from coast stations; rates furnished by coast stations are expressed in gold francs, or in any other currency by special arrangement between the respective administrations and/or recognised private operating agencies of the ship and coast stations.

SUPPLEMENTARY CHARGES

(2 Unless special arrangements between the administrations or the recognised private operating agencies concerned are in effect, the charge for a *préavis* call, a call with *avis d'appel*, and a collect call shall be the same as that for an ordinary call of the same duration, with the addition of a supplementary charge equal to one-third of the charge for a radiotelephone call of three minutes' duration, between the two stations concerned.

The *préavis* charge or *avis d'appel* charge is payable when the ship station with which the call is booked transmits the particulars of this booking. The charge is, however, not collected when because of a fault of the service, the call is not established or the station wanted has not been advised. The caller will, however, be required to pay the supplementary charge for a collect call if the called subscriber refuses to pay for the call and the call is not established.

When the booking of a radiotelephone call which is liable to the payment of a supplementary charge (for example, a collect call) is accompanied by a *préavis* or an *avis d'appel*, only one supplementary charge shall be collected.

The current charges for radiotelephone calls and supplementary services via United Kingdom coast stations are published in Notices to Ship Wireless Stations.

Telephone Credit Cards

79. . Telephone credit cards may be used when approved by the administration concerned and the operating agency responsible for the ship station. These credit cards enable telephone subscribers, or their accredited agents, to make radiotelephone calls without prepayment.

The code number on the credit card is in a special sequence and the ship station should inform the coast station of this number when booking the call. The coast station will say if the call can be accepted on the card number quoted.

CHAPTER III

Procedures in the Maritime Mobile Radio Telegraph Service

PART 1—USE OF FREQUENCIES

General

80. Ship stations equipped with radiotelegraph apparatus intended to be used for normal traffic must be provided with devices permitting change-over from transmission to reception and vice versa without manual switching. In addition these stations should be able to listen on the reception frequency during the course of periods of transmission.

Bands between 90 and 160 kc/s

CALL AND REPLY

81. (1) The frequency 143 kc/s (class A1 only) is the international calling frequency used by stations of the maritime mobile service in the bands between 90 and 160 kc/s.

Apart from 143 kc/s, the use of any frequency between 140 and 146 kc/s is forbidden.

The frequency for replying to a call sent on 143 kc/s is:

—for a ship station, 143 kc/s;

—for a coast station, its normal working frequency.

The frequency 143 kc/s shall be used exclusively for individual calls, and by ships for replies to such calls and the transmission of signals preparatory to traffic.

TRAFFIC

(2) The following rules must be observed by stations of the maritime mobile service using class A1 or F1 emissions in the bands between 90 and 160 kc/s.

In addition to 143 kc/s all apparatus installed on ships for use in the authorised bands between 110 and 160 kc/s, must provide at least two working frequencies selected from within these bands.

After establishing communication on the general calling frequency 143 kc/s, a ship station transmits its traffic on a working frequency.

Unless otherwise provided for in the List of Coast Stations a coast station will keep watch on 143 kc/s and will transmit its traffic on a working frequency assigned to it and indicated in that List.

As a general rule, during its hours of service, any ship station working in the bands between 110 and 160 kc/s shall, when not engaged in other communications, keep watch every hour on 143 kc/s for five minutes beginning at x h 35 G.M.T. Individual calls on 143 kc/s should preferably be made in this period.

Bands between 405 and 535 kc/s

82. (1) Transmitters used in ship stations working in the authorised bands between 405 and 535 kc/s must be provided with devices readily permitting a material reduction of power.

All ship stations equipped to work in the authorised bands between 405 and 535 kc/s must be able to:

- (a) send and receive class A2 emissions on 500 kc/s.
- (b) send, in addition, class A1 and A2 emissions on at least two working frequencies;
- (c) receive, in addition, class A1 and A2 emissions on all other frequencies necessary for their service.

The provisions of (b) and (c) do not apply to apparatus provided solely for distress, urgency and safety purposes.

DISTRESS

(2) The frequency 500 kc/s is the international distress frequency for radiotelegraphy; it is used for this purpose by ship, aircraft and survival craft stations using the bands between 405 and 535 kc/s when requesting assistance from the maritime services. (For particulars of this use see Chapter IV.)

In addition 500 kc/s may be used only:

- (a) for call and reply;
- (b) by coast stations to announce that a traffic list is about to be sent on a working frequency;
- (c) with discretion, for direction-finding outside areas of heavy traffic, and on condition that no interference is caused to signals of distress, urgency and safety.

Apart from the transmissions authorised on 500 kc/s all transmissions on the frequencies between 490 and 510 kc/s are forbidden.

Any emission capable of causing harmful interference to distress, alarm, urgency or safety signals on 500 kc/s is prohibited.

In order to facilitate the reception of distress calls, other transmissions on the frequency 500 kc/s shall be reduced to a minimum, and in any case shall not exceed three minutes.

CALL AND REPLY

(3) The general calling frequency, which must be used by ship and coast stations using the bands between 405 and 535 kc/s and by aircraft stations wishing to communicate with stations of the maritime mobile service using frequencies in these bands, is the frequency 500 kc/s.

The frequency for replying to a call sent on the general calling frequency is 500 kc/s, except where the calling station specifies the frequency on which it will listen for the reply.

However, in regions of heavy traffic, ship stations should request coast stations to answer on their normal working frequency, which is printed in heavy type in the List of Coast Stations. In these regions coast stations may answer calls made by ships of their own nationality in accordance with special arrangements made by the administration concerned.

For call and reply during periods of distress working on 500 kc/s, see (4) below.

TRAFFIC

(4) Ship stations must use working frequencies chosen from the following: 425, 454, 468, 480 and 512 kc/s. In addition 512 kc/s may be used in Regions 1 and 3 (roughly the Eastern Hemisphere) and 448 kc/s in Region 2 (roughly the Western Hemisphere)

Ship stations should indicate in their call the working frequency they propose to use for the sending of traffic.

In Regions 1 and 3 when 500 kc/s is being used for distress, 512 kc/s may be used by ship and coast stations as a supplementary call and reply frequency; coast stations may make use of other arrangements for call and reply which shall be notified in the List of Coast Stations.

In any area when 512 kc/s is in use as a supplementary call and reply frequency, it must not be used as a working frequency by ship stations in that area.

SILENCE PERIODS

(5) In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorised bands between 405 and 535 kc/s shall, during their hours of service, take the necessary measures to ensure watch on the international distress frequency 500 kc/s for three minutes twice an hour beginning at x h 15

and x h 45 Greenwich Mean Time (G.M.T.) by an operator using headphones or a loud-speaker.

During these periods, except for the transmission of distress, urgency and safety signals provided for in Chapter IV:

- (a) transmissions shall cease in the bands between 485 and 515 kc/s;
- (b) outside these bands, transmissions of stations of the mobile service may continue; stations of the maritime mobile service may listen to these transmissions on the express condition that they first ensure watch on the distress frequency.

NORMAL WATCH

(6) Stations of the maritime mobile service open to public correspondence and using frequencies in the authorised bands between 405 and 535 kc/s shall, during their hours of service, remain on watch on 500 kc/s. This watch is obligatory only for class A2 emissions.

These stations, while observing the requirements for the silence periods, are authorised to relinquish this watch only when they are engaged in communications on other frequencies.

When they are engaged in such communications:

- Ship stations may maintain this watch on 500 kc/s by means of an operator using headphones or a loud-speaker or by some appropriate means such as an automatic alarm receiver.
- Coast stations may maintain this watch on 500 kc/s by means of an operator using headphones or a loud-speaker (in the latter case an indication may be inserted in the List of Coast Stations).

Bands between 1605 and 1625 kc/s

83. A limited radiotelegraphy service is conducted between suitably equipped small craft and United Kingdom coast stations in the band between 1605 and 1625 kc/s.

Particulars of this service are published in Notices to Ship Wireless Stations.

Bands between 4000 and 27500 kc/s

GENERAL PROVISIONS

84. (1) In ship stations, all apparatus using class A1 emissions on

frequencies in the authorised bands between 4000 and 27500 kc/s must satisfy the following conditions:

- (a) in each of the bands necessary to carry on the station's service it shall have at least two working frequencies in addition to one in the calling band;
- (b) changes of frequency in transmitting apparatus shall be effected within five seconds if the frequencies are in the same band and within fifteen seconds if the frequencies are in different bands;
- (c) in the matter of frequency changing, receiving apparatus shall be capable of a performance equal to that of the transmitting apparatus.

DIVISION OF THE EXCLUSIVE MARITIME FREQUENCY BANDS

(2) The exclusive maritime radiotelegraph bands between 4000 and 23000 kc/s contain separate allocations for coast stations and ship stations. Each of the allocations for ship stations is divided into four parts as follows:

- (a) (a) a band of calling frequencies;
- (b) (b) a band of working frequencies for high traffic ships (passenger ships and certain other ships handling large volumes of traffic);
- (c) (c) a band of working frequencies for low traffic ships (all other ships);
- (d) (d) a band of working frequencies for ships using wideband telegraphy, facsimile and special transmission systems but excluding manual Morse and telephony.

In addition there is an exclusive band of working frequencies for use by all ships in the 25000 kc/s band.

An internationally agreed frequency channelling plan is in operation in all the above bands and channels are assigned in accordance with an orderly system of rotation which ensures approximately the same number of assignments on each channel.

Stations on ships of the United Kingdom are assigned frequency channels as follows:

- (i) high traffic ships—one channel in each calling band, three channels in each high traffic ship working band, and one channel in the 25000 kc/s working band;
- (ii) low traffic ships—one channel in each calling band, two channels in each low traffic ship working band (one in each of groups A and B into which the band is divided), and one channel in the 25000 kc/s working band.

Frequency channels for wideband systems are assigned only when specially applied for.

The centre frequency channel in each ship calling band is not normally assigned to ship stations but is reserved for the use of aircraft desiring to communicate with stations of the maritime mobile service; the centre frequency channel of the 8000 kc/s ship calling band (viz. 8,364 kc/s) is additionally designated for use by survival craft for search and rescue communications.

Ship stations equipped to operate in the calling, high traffic and low traffic ship bands and in the additional ship working band at 25000 kc/s must employ only class A1 emission. However, in the high traffic ship bands, other classes of emission are not precluded provided such emissions can be contained within the bandwidth of the working channel. Survival craft stations may use class A2 emission in these bands.

Coast stations operating in the exclusive coast station bands must not use Type 2 emissions.

CALL AND REPLY

(3) To make a call, a ship station should use one of its assigned frequency channel. Endeavour should be made to select for calling the band with the most favourable propagation characteristics for effecting reliable communication. In the absence of reliable data, a ship station should listen for the wanted coast station before making the call, and the strength and readability of signals from the coast station will provide a useful guide as to the preferable band for calling.

The calling frequency to be used by a coast station, in each of the bands for which it is equipped, is its normal working frequency as shown in the List of Coast Stations.

Unless the calling station specifies otherwise, the frequency for reply to a call made in any band is as follows:

- (a) for a ship station, its appropriate assigned calling frequency in the same band as that used by the calling station;
- (b) for a coast station, its normal working frequency in the same band as that used by the calling station;

Except for communications relating to the safety of life, and search and rescue, the use of frequencies in the ship calling bands for any purpose other than call and reply is forbidden.

TRAFFIC

(4) After establishing communication on a calling frequency a ship station changes to a working frequency for the transmission of traffic.

Ship stations should endeavour to ensure that their assigned working frequencies are given equal use for traffic purposes.

A coast station will transmit its traffic on its normal working frequency or any other frequency assigned to it.

ABBREVIATIONS FOR INDICATING WORKING FREQUENCIES

(5) In these bands the following system of abbreviations may be used:

- (a) to designate a working frequency, the last three figures of the frequency excluding fractions of a kilocycle may be transmitted.
- (b) A ship station may be requested to reply on its working frequency in Group A or Group B, as the case may be, by the transmission of QSW A or QSW B and it may indicate its proposed use, or change of use, by transmitting QSY A or QSY B.

PART 2—GENERAL PROCEDURE

General

- 85.** The use of the Morse code signals is obligatory in the maritime and aeronautical mobile radiotelegraph services. However, for special types of radiocommunication the use of other signals is not precluded.

A list of abbreviations indicating words and phrases in common use is given in Appendix 2. Only these abbreviations are to be used in the maritime mobile service.

Control of Working

- 86.** The provisions of this Section are not applicable in cases of distress, urgency or safety.

In communication between coast stations and ship stations, the ship station shall comply with the instructions given by the coast station, in all questions relating to the order and time of transmission, to the choice of frequency and class of emission, and to the duration and suspension of work.

In communication between ship stations, the station called controls the working. However, if a coast station finds it necessary to intervene, these stations shall comply with the instructions given by the coast station.

Before transmitting, a station must take precautions to ensure that its emissions will not interfere with transmissions already in progress; if such interference is likely, the station awaits an appropriate break in the communications in progress.

If these precautions having been taken, the emissions of the station should, nevertheless, interfere with a transmission already in progress the following rules shall be applied:

- (a) The ship station whose emission causes interference to the correspondence of a ship station with a coast station, shall cease sending at the first request of the coast station.
- (b) The ship station whose emission causes interference to communications already in progress between ship stations shall cease sending at the first request of one of the other stations.

- (c) The station which requests this cessation shall indicate the approximate waiting time imposed on the station whose emission it suspends.

When a ship station transmits on a working frequency of a coast station and causes interference with the transmission of such coast station, it shall suspend working at the first request of the latter.

Calling Procedure

- 87.** (1) For making the call and for transmitting preparatory signals, the calling station shall use a frequency on which the station called keeps watch.

As a general rule, it rests with the ship station to establish communication with the coast station. For this purpose, the ship station may call the coast station only when it comes within the service area of the latter, that is to say, that area within which, by using an appropriate frequency, the ship station can be heard by the coast station.

However, a coast station having traffic for a ship station may call this station if it has reason to believe that the ship station is keeping watch and is within the service area of the coast station.

METHOD OF CALLING

- (2) The call consists of:
- the call sign of the station called, not more than twice;
 - the word DE;
 - the call sign of the calling station, not more than three times;

However, in the bands between 4000 and 27500 kc/s, when the conditions of establishing contact are difficult, the call signs may be transmitted more than three times but not more than ten times each. In this case, the call signs of the called and the calling station shall be transmitted in alternate sequence up to a total of twenty call signs altogether (e.g. ABC ABC DE WXYZ WXYZ ... or ABC ABC ABC DE WXYZ WXYZ WXYZ ...).

When a station called does not reply to a call sent three times at intervals of two minutes, the calling shall cease and shall not be renewed until after an interval of fifteen minutes.

However, in the case of a communication between a station of the maritime mobile service and an aircraft station, calling may be renewed after an interval of five minutes.

Before renewing the call, the calling station shall ascertain

that the station called is not in communication with another station.

If there is reason to believe that no harmful interference will be caused to other communications in progress, the call, sent three times at intervals of two minutes, may be repeated after an interval of less than fifteen minutes but not less than three minutes.

The call should be followed by the service abbreviation indicating the working frequency which the calling station proposes to use for the transmission of its traffic.

Indication of the Number of Radiotelegrams or of Transmission in Series

88. When the calling station has more than one radiotelegram to transmit to the station called, the preparatory signals of Section 87 should be followed by the service abbreviation and the figure giving the number of such radiotelegrams.

When the calling station wishes to send its radiotelegrams in series, it should indicate this by adding the service abbreviation for requesting consent of the station called.

General Call to "All Stations"

89. Two types of calling signal to "all stations" are recognised:
- (a) Call CQ followed by the letter K;
 - (b) Call CQ not followed by the letter K.

Stations desiring to enter into communication with stations of the mobile service, without knowing the names of any such stations within their service area, may use the enquiry CQ in place of the call sign of the station called in the calling formula, the call being followed by the letter K (general call to all stations in the mobile service with request for reply). In the maritime mobile service, in regions where traffic is congested, the use of the call CQ followed by the letter K is forbidden. As an exception it may be used with signals denoting urgency.

The call CQ not followed by the letter K (general call to all stations without request for reply) is used before the transmission of information of any kind intended to be read or used by anyone who can intercept it.

The call CP followed by two or more call signs or by a code word (call to certain receiving stations without request for reply) is used only for the transmission of information of any nature intended to be read or used by the persons authorised.

Procedure for Replying to Calls

- 90.** (1) For transmitting the reply to calls and to preparatory signals, the station called uses the frequency on which the calling station keeps watch, unless the calling station has specified a frequency for the reply.

REPLY TO A CALL

- (2) The reply to a call consists of:
- the call sign of the calling station, not more than three times;
 - the word DE;
 - the call sign of the station called.

AGREEMENT ON THE FREQUENCY TO BE USED FOR TRAFFIC

- (3) If the station called is in agreement with the calling station it transmits:

- the reply to the call;
- the service abbreviation indicating that from that moment onwards it will listen on the working frequency announced by the calling station;
- any other necessary indications;
- the letter K if the station called is ready to receive the traffic from the calling station.

If the station called is not in agreement with the calling station it transmits:

- the reply to the call;
- the service abbreviation indicating the working frequency to be used by the calling station.

When agreement is reached regarding the working frequency to be used by the calling station, the called station indicates its readiness to receive traffic from the calling station.

REPLY TO REQUEST FOR TRANSMISSION BY SERIES

- (4) The station called, in replying to a calling station which has proposed to transmit its radiotelegrams by series (see Section 88) shall indicate, by means of the service abbreviation, its acceptance or refusal. In the former case it shall specify, if necessary, the number of radiotelegrams it is ready to receive in one series.

DIFFICULTIES IN RECEPTION

(5) If the station called is unable to accept traffic immediately, it will make the reply to the call followed by the signal ·-·-·-· (wait), and a number indicating in minutes the probable duration of the waiting time thus: ABCD (up to three times) DE XYZ QTC2 ·-·-·-· 5 ·-·-·-· (meaning "I have two radiotelegrams to transmit to you, wait five minutes"); or, if other ships are waiting, it may indicate a numbered turn by using the service abbreviation QRY followed by the number of the turn.

If the probable duration exceeds ten minutes (five minutes in communications between aircraft and maritime mobile stations), the reason for the delay should be given.

When a station receives a call without being certain that such a call is intended for it, it must not reply until the call has been repeated and understood. When, on the other hand, a station receives a call which is intended for it but is uncertain of the call sign of the calling station, it must reply immediately using the service abbreviation QRZ? in place of the call sign of this latter station.

When a coast station receives calls from several mobile stations at practically the same time it decides the order in which these stations may transmit their traffic. Its decision shall be based on the priority (see Section 20) of the radiotelegrams or radio-telephone calls that mobile stations have on hand and on the need for allowing each calling station to clear the greatest possible number of communications.

Example of Call, Reply and Transfer to Working Frequencies

91. A ship, whose call sign is ABCD, wishes to transmit four radiotelegrams on the working frequency 425 kc/s to a coast station whose call is XYZ and wishes to know how many radiotelegrams it can send at a time. After ascertaining that the station is not engaged, the ship signals on the calling frequency 500 kc/s:

XYZ (up to three times) DE ABCD (up to three times) QTC
4 QSW 425 K.

The coast station XYZ which is ready to receive traffic on 425 kc/s and to transfer to its own working frequency 482 kc/s, replies:

ABCD (up to three times) DE XYZ QSY 425 QSW 482 K.

The ship changes to its working frequency 425 kc/s and signals:

XYZ (up to three times) DE ABCD QSG ? K.

The coast station replies on 482 kc/s:

ABCD (up to three times) DE XYZ QSG (1, 2, 3 or 4) K.

If the ship ABCD is in a heavy traffic region and is aware that the normal working frequency of coast station XYZ is 482 kc/s it should make the initial call on the calling frequency 500 kc/s as follows:

XYZ (up to three times) DE ABCD (up to three times) QTC4
QSW 425 QSX 482 K.

The coast station replies on 482 kc/s as follows:

ABCD (up to three times) DE XYZ QSY 425 K.

The ship changes to its working frequency 425 kc/s and signals:

XYZ (up to three times) DE ABCD QSG ? K.

The coast station replies:

ABCD DE XYZ QSG (1, 2, 3 or 4) K.

Coast Station Traffic Lists

- 92.** Each coast station, as far as practicable, transmits its call in the form of "traffic lists" consisting of the call signs in alphabetical order of all mobile stations for which it has traffic on hand. These calls shall be made at specified times at intervals of at least two hours and not more than four hours during the working hours of the coast station.

Coast stations transmit their traffic lists on their normal working frequencies in the appropriate bands. This transmission must be preceded by a general call to all stations (CQ).

The call to all stations announcing the traffic list may be sent on a calling frequency in the following form:

- CQ, not more than three times;
- the word DE;
- the call sign of the calling station, not more than three times;
- QSW followed by the indication of the working frequency or frequencies upon which the traffic list is about to be sent.

In no case may this preamble be repeated.

The above provisions are obligatory when 500 kc/s is used.

The hours at which coast stations transmit their traffic lists, and the frequencies and classes of emission which they use for this purpose are published in the List of Coast Stations.

Ship stations should, as far as possible, listen to the traffic lists transmitted by coast stations. On hearing their call sign in such a list they must reply as soon as they can do so.

When the traffic cannot be sent immediately, the coast station must inform each ship station concerned of the probable time at which working can begin, and also, if necessary, the frequency and class of emission which will be used.

Signal for End of Work

93. The end of work between two stations is indicated by each station signalling **···---** (end of work).

The signal is also used when the transmission of radiotelegrams of general information, meteorological information and general safety notices is finished and when transmission is ended in a long distance radiocommunication service with deferred acknowledgment of receipt or without acknowledgment of receipt.

Failure to Establish Communication with a United Kingdom Coast Station

94. When a ship station passes within the service area of a United Kingdom coast station and is prevented for any reason from communicating with that station, it is the responsibility of the ship station to secure the redirection of any traffic held for the ship by that coast station, through the first United Kingdom coast station with which communication is established.

Information to be Furnished by a Ship Station (TR)

95. A coast station may, by means of the abbreviation TR, ask a ship station to furnish it with information concerning its position and voyage.

The information, preceded by the abbreviation TR, should be furnished by the ship station without prior request from the coast station whenever such a measure seems appropriate.

The information is furnished only on the authority of the master or person responsible for the ship.

This information is required by coast stations for the proper circulation of traffic; instructions have been given that a TR should be obtained by coast stations in the United Kingdom and the Irish Republic from every ship which communicates with them. In order to avoid unnecessary signalling a United Kingdom ship, upon establishing communication with one of these coast stations, is requested to furnish a TR without waiting for the coast station to ask for it.

The TR comprises:

- the name of the ship;
- the approximate distance, in nautical miles, and bearing of the ship from the coast station or a known geographical location; or the position in latitude and longitude;
- the course and speed, if available;
- the next port of call.

EXAMPLE: GLD DE GBSS TR QUEEN ELIZABETH 100
WEST BISHOPS ROCK SOUTHAMPTON AR.

Closure of Service on Ship Stations

96. (1) Ship stations whose service is not continuous shall not close before:

- (a) finishing all operations resulting from a distress call, urgency or safety signal;
- (b) exchanging, so far as practicable, all traffic originating in or destined for coast stations situated within their service area and for other ship stations which, being within their service area, have indicated their presence before the actual cessation of work.

Any ship station not having fixed working hours shall inform the coast stations with which it is in communication of the time of closing and the time of re-opening its service.

ARRIVAL IN, AND DEPARTURE FROM, PORT

(2) Any ship station arriving at an intermediate or terminal port, and whose service is about to close, shall:

- (a) notify accordingly the nearest coast station and, if appropriate, the other coast stations with which it generally communicates;
- (b) not close until after the disposal of traffic on hand, unless this conflicts with the regulations in force in the country of the port of call.

Ship station operators must advise the coast stations concerned during their last watchkeeping period before docking that they expect to enter port before the next watchkeeping period begins, irrespective of whether the period of non-watch-keeping extends to two hours only or to ten hours as in the case of the break between 2200 and 0800 next day.

Upon departure from port the ship station must notify the

coast stations concerned that its service is re-opening as soon as such re-opening is permitted by the regulations in force in the country of the port of departure. However, a ship station not having fixed hours of service may defer such notification until the station first re-opens its service after departure from port.

Failure to notify the appropriate station or stations could lead to unnecessary enquiries with consequent delay to traffic.

Transmission of Test Signals

97. When it is necessary for a ship station to send signals for testing or adjustment which are liable to interfere with the working of neighbouring coast stations, the consent of these stations must be obtained before such signals are sent.

Test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, shall not be continued for more than ten seconds and shall be composed of a series of VVV followed by the call sign of the station emitting the test signals.

The operator should always listen on the appropriate frequency before testing in order to guard against interfering with any transmission which might be in progress.

It is of the utmost importance that radiation tests of portable transmitters for lifeboats should be made only by using the hand signalling key. On no account may tests be made with the switch in either of the distress positions unless the aerial is disconnected.

PART 3—TRANSMISSION OF RADIOTELEGRAMS

Transmission of Radiotelegrams to Coast Stations

- 98.** In routing radiotelegrams, a ship station should, as a general rule, give preference to the coast station established on the territory of the country of destination, or the country likely to provide the most suitable transit route for radiotelegrams.

However, to expedite or facilitate the routing of radiotelegrams to a coast station, a ship station may transmit them to another ship station. The latter shall dispose of such radiotelegrams in the same manner as if they originated with itself. It should include in the preamble of such radiotelegrams an indication that they have been relayed (see Section 57).

A ship station, when using class A2 emission in the bands between 405 and 535 kc/s to transmit radiotelegrams to a coast station which is not the nearest to it, shall cease working or shall change frequency or class of emission upon the first request made by a coast station which is nearer to the ship station than the coast station being worked, when this request is based upon interference which the working of the ship station causes to the nearer coast station.

If the sender of a radiotelegram has indicated the coast station to which he desires his radiotelegram to be sent, the ship station shall, in order to effect this transmission to the coast station indicated, wait, if necessary, until the conditions specified above are fulfilled.

In order to facilitate disposal of traffic, and subject to such restrictions as individual governments may impose, coast stations may, in exceptional circumstances and with discretion, without incurring additional charges, exchange radiotelegrams and service messages relating thereto.

Ships fitted with radiotelephony as well as radiotelegraphy should normally transmit radiotelegrams by radiotelegraphy.

Priority and Order of Work

- 99.** Radiotelegrams must be transmitted in the order of priority given in Section 20.

Radiotelegrams of the same order of priority must be transmitted in the progressive order of their times of handing-in.

In communications between a coast station and a ship station, the coast station decides the order of working and the method of transmitting radiotelegrams, i.e. singly or by series. In the case of communications between two ship stations the decision rests with the station called.

In cases where both stations are able to change from sending to receiving without manual switching, and working conditions permit, it may be mutually agreed by use of the service abbreviation QSK before work commences, that the sending station will continue to transmit until the completion of its traffic, or until the receiving station breaks in on the transmission with the service abbreviation BK.

Numbering in Daily Series

- 100.** Radiotelegrams of all kinds, including paid and unpaid service radiotelegrams, transmitted by ship stations shall be numbered in a separate daily series to each station. Number 1 shall be given to the first radiotelegram sent each day, commencing at 0001 G.M.T., to each separate station.

A series of numbers which has begun in radiotelegraph should be continued in radiotelephony and vice versa.

Preparatory Signals

- 101.** 108. When communication is established between two stations on working frequencies, and working procedures agreed, the transmission of a single radiotelegram or a series, or traffic working under the BK method, is preceded by the following:
- the call sign of the receiving station;
 - the word DE;
 - the call sign of the sending station.

Operating Signals and Preamble

COMMENCING SIGNAL

- 102.** 109.(1) The transmission of a radiotelegram is preceded by the signal — · — · —

PREAMBLE

(2) The preamble to a radiotelegram consists of the prefix (if any), the name of the ship or office of origin, the serial number,

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the number of words, the date and time groups and any service instructions such as routing instructions.

THE BREAK SIGN

(3) The break sign (— · · · —) is used to separate the preamble from the paid service instructions, the paid service instructions from each other, the paid service instructions from the address, the address from the text and the text from the signature.

TERMINATING SIGNAL

(4) The transmission of a radiotelegram is terminated by the signal · — · — · .

Form of Transmission of a Radiotelegram

103. The complete form of transmission of a radiotelegram is as follows: — · — · — (commencing signal).

Prefix (if any).

Name of ship of origin (office of origin if originating on land).

Serial number of radiotelegram.

Number of words.

Date.

Time of handing-in.

Service instructions (if any).

— · — · — (break sign).

Service indications (if any, and separated by break sign if more than one).

— · — · — (break sign).

Address.

— · — · — (break sign).

Text (if no signature follows, send terminating signal here).

— · — · — (break sign).

Signature (if any).

· — · — · (terminating signal).

EXAMPLE:

— · — · — CANBERRA 5 7 12 2205 — · — · — BROWN 25
NEWSTREET SOUTHAMPTON — · — · — ARRIVE
TOMORROW — · — · — JOHN · — · — ·

Figures, or mixed groups of letters, figures or signs in the address, text or signature of a radiotelegram must be repeated at the end of its transmission. Proper names and doubtful words may also be repeated as considered necessary. In Government radiotelegrams in plain language, proper names and doubtful words must be repeated.

This repetition may be preceded by the abbreviation COL (collate) and must be ended with the terminating signal (·-·-·).

Upon completion of the transmission of a single radiotelegram, or of the last in a series, the terminating signal should be followed by the letter K, inviting the receiving station to acknowledge receipt.

Long Radiotelegrams

- 104.** Long radiotelegrams, whether in plain language or in secret language, are normally regarded as the equivalent of a series of radiotelegrams. When employing the BK method of working (see Section 99) the transmitting station may continue to send until the completion of the radiotelegram, or until the receiving station breaks in by transmitting the abbreviation BK.

If this method of working is not employed, long radiotelegrams should, as a general rule, be transmitted in sections of fifty words in the case of plain language and twenty words or groups in the case of secret language. At the end of each section, the signal ·-·-· (?) , meaning, "Have you received the radiotelegram correctly up to this point?" should be transmitted. If the section has been correctly received the receiving station transmits the letter K and the transmission of the next section proceeds.

Any necessary repetitions should be given at the end of each section.

Acknowledgment of Receipt

- 105.** The acknowledgment of receipt of a radiotelegram or a series of radiotelegrams is given by the receiving station in the following manner:

- the call sign of the sending station;
- the word DE;
- the call sign of the receiving station;
- the letter R followed by the number of the radiotelegram;
- or
- the letter R followed by the number of the last radiotelegram of a series.

Government radiotelegrams written wholly or partly in secret language must be repeated (collated) by the receiving station; acknowledgment of receipt should not be given until confirmation is received from the transmitting station that the repetition has been checked with its copy of the radiotelegram and found correct. No charge is levied for this repetition.

Procedure when Communication Becomes Difficult

106. In the mobile service, when communication becomes difficult, the two stations in communication make every effort to complete the radiotelegram in course of transmission. The receiving station may request not more than two repetitions of a radiotelegram of which the reception is doubtful. If this triple transmission is ineffective, the radiotelegram is kept on hand in case a favourable opportunity for completing its transmission occurs.

If the transmitting station considers that it will not be possible to re-establish communication with the receiving station within twenty-four hours, it proceeds as follows:

- (a) **If the transmitting station is a ship station**, it immediately informs the sender of the reason for the non-transmission of his radiotelegram. The sender may then request:
 - (i) that the radiotelegram be transmitted through another coast station;
 - or
 - (ii) that the radiotelegram be held until it can be transmitted without additional charge; or
 - (iii) that the radiotelegram be cancelled.
- (b) **If the transmitting station is a coast station** it applies the provisions of Section 55.

When a ship station subsequently transmits a radiotelegram thus held to the coast station which incompletely received it, this new transmission must bear the service instruction "ampliation" in the preamble of the radiotelegram. If the radiotelegram is transmitted to another coast station subject to the same administration or the same private enterprise, the new transmission must bear the service instruction "ampliation via ..." (insert here the call sign of the coast station to which the radiotelegram was transmitted in the first instance) and the administration or private enterprise in question may claim only the charges relating to a single transmission. The "other coast station" which thus forwards the radiotelegram may claim from the ship of origin any additional charges resulting from the

transmission of the radiotelegram over the general communication network between itself and the office of destination.

When the coast station designated in the address as the station by which the radiotelegram is to be forwarded cannot reach the ship of destination, and has reason to believe that such ship station is within reach of another coast station of the administration or private enterprise to which it is itself subject, it may, if no additional charge is incurred thereby, forward the radiotelegram to this other coast station.

A station of the mobile service which has received a radiotelegram and has been unable to acknowledge its receipt in the usual way, must take the first favourable opportunity to give such acknowledgment.

When the acknowledgment of receipt of a radiotelegram transmitted between a ship station and a coast station cannot be given direct, it is forwarded through another ship or coast station by service advice if the latter is able to communicate with the station which has transmitted the radiotelegram in question. In any case no additional charge must result.

Administrations reserve the right to organise a long-distance radiocommunication service between coast stations and ship stations, with deferred acknowledgment of receipt, or without any acknowledgment of receipt. When there is doubt about the accuracy of any part of a radiotelegram transmitted under either of these systems, the indication "doubtful reception" is entered on the copy delivered to the addressee and the doubtful words or groups of words are underlined. If the words are missing, blanks are left in the places where these words should be.

Identification of Ships Bearing the Same Name

- 107.** When, because of duplication of names, the name of a ship is followed by its call sign, the latter should be separated from the name of the station by a fraction bar.

EXAMPLE: ORIANA/GVSN (not ORIANAGVSN).

Preamble for Inland Transmission from Coast Station

- 108.** When a coast station sends over the inland telecommunication network a radiotelegram received from a ship station, it inserts the name of the coast station and the name of the last ship which acted as intermediary (should any retransmission have occurred).

In order to avoid any confusion with a telegraph office or a fixed station of the same name, the coast station may, if desirable, complete the indication of the name of the ship of origin by the word "ship" placed before the name of the station of origin.

Accounting Particulars to be Supplied to Coast Stations

- 109.** When the name and address of the administration or private operating agency controlling a ship station are not given in the appropriate list of stations or are no longer in agreement with the particulars given therein, it is the duty of the ship station to furnish as a matter of regular procedure, to the coast station to which it transmits traffic, all the necessary information in this respect.

Long Distance Ship-Shore Communication

- 110.** A long-distance high frequency radiocommunication service between certain Commonwealth coast stations and Commonwealth shipping is in operation. In this service the world has been divided into a number of Areas. Each Area is covered by an Area transmitting station from which radiotelegrams are sent to ships during scheduled periods daily.

Radiotelegrams from ships equipped with high frequency transmitters should be sent, after direct communication has been established, to the Area receiving station situated in, or nearest to, the country of destination; but where communication cannot quickly be established with this station radiotelegrams may be sent to any Area receiving station, whence they will be relayed without extra charge to the appropriate station over a point-to-point radio network.

Full details of this service are ~~published in current Notices to Ship Wireless Stations and these Notices should be consulted.~~
given in Appendix 9.

CHAPTER IV

Distress, Urgency, and Safety Communications by Radiotelegraphy

General

- 111.** In the maritime mobile service distress communications by radiotelegraphy should be conducted in accordance with the following procedures. However, nothing in these procedures shall prevent a ship in distress from making use of any means at its disposal to attract attention, make known its position and obtain help.

The distress call and the distress message shall be sent only on the authority of the master or person responsible for the ship.

The speed of transmission in cases of distress, urgency and safety shall not in general exceed sixteen words a minute.

In distress communications extreme care should be exercised by all stations taking part to ensure that their transmissions do not cause harmful interference to the other stations engaged, especially to the transmissions of the station actually in distress.

Distress Frequency

- 112.** The frequency 500 kc/s is the international distress frequency for radiotelegraphy; it shall be used for this purpose by ship, aircraft and survival craft stations using frequencies in the bands between 405 and 535 kc/s when requesting assistance from the maritime services. It shall be used for the distress call and distress traffic, for the urgency signal and urgency messages, and for the safety signal and, outside regions of heavy traffic, short safety messages.

When practicable, safety messages should be transmitted on a working frequency after a preliminary announcement on 500 kc/s.

However, ship and aircraft stations which cannot transmit on 500 kc/s should use any other available frequency on which attention might be attracted.

Alarm Signal

- 113.** The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between two consecutive

dashes being one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended.

Any ship station working in the band 405 to 535 kc/s which is not provided with an automatic apparatus for the transmission of the alarm signal, shall be permanently equipped with a clock, clearly marking the seconds, preferably by means of a sweep hand completing one revolution per minute. This clock must be placed at a point sufficiently visible from the operator's table in order that the operator may, by keeping it in view, easily and correctly time the different elements of the alarm signal.

The purpose of this special signal is to actuate automatic devices giving an alarm to attract the attention of the operator when there is no listening watch on the distress frequency.

It must be used only:

- (a) to announce that a distress call or message is about to follow;
- (b) by a duly authorised coast station to announce that an urgent cyclone warning is to be transmitted;
- (c) to announce the loss of a person or persons overboard when the assistance of other ships is required and cannot be obtained satisfactorily by the use of the urgency signal only.

In the case described in (c), the alarm signal must not be repeated by other stations and the message which follows must be preceded by the urgency signal (see Section 124).

In cases (b) and (c) the warning or message shall not begin until two minutes after the end of the alarm signal.

Distress Signal

- 114.** In radiotelegraphy the distress signal consists of the group ···—··· (symbolised by SOS) transmitted as a single signal in which the dashes are emphasised so as to be distinguished clearly from the dots.

This signal indicates that a ship, aircraft or other vehicle is threatened by grave and imminent danger and requests immediate assistance.

Distress Call

- 115.** The distress call sent by radiotelegraphy consists of:
—the distress signal SOS sent three times;

- the word DE;
- the call sign of the mobile station in distress, sent three times.

The distress call shall have absolute priority over all other transmissions. All stations which hear it shall immediately cease any transmission capable of interfering with the distress traffic and shall continue to listen on the frequency used for the emission of the distress call. This call shall not be addressed to a particular station and acknowledgment of receipt shall not be given before the distress message which follows it is sent.

Distress Message

116. The radiotelegraph distress message consists of:

- the distress SOS;
- the name, or other identification, of the mobile station in distress;
- particulars of its position;
- the nature of the distress and the kind of assistance desired;
- any other information which might facilitate the rescue.

As a general rule, a ship shall signal its position in latitude and longitude (Greenwich), using figures for the degrees and minutes, together with one of the words NORTH or SOUTH and one of the words EAST or WEST. The signal **•-•-•-•-** shall be used to separate the degrees from the minutes. When practicable, the true bearing and distance in nautical miles from a known geographical position may be given. If, however, the vessel is in distress on a rock or shoal, or near a headland or other place, a precise geographical indication of the position of the vessel should be given (for instance, "near the Skerries off Holyhead") in order that the place may not be mistaken for another place with the same name or another part of the coast. In the case of a vessel in distress and drifting, the Master should, after indicating his position, state whether his vessel is in the "light" or "loaded" condition and also the probable direction and rate of drift.

An aircraft in flight will transmit as much information in its distress message as time permits. As a general rule, the message will contain its estimated position and the time, its heading in degrees stating whether magnetic or true, its indicated air speed and altitude, the type of aircraft, the nature of the distress, the type of assistance desired and any other information such as the intention of the person in command to alight on the sea.

Distress Traffic

- 117.** Distress traffic consists of all messages relating to the immediate assistance required by the mobile station in distress.

In distress traffic, the distress signal shall be sent before the call and at the beginning of the preamble of any radiotelegram.

Distress Call and Message Transmission Procedure

- 118.** The radiotelegraph procedure for the transmission of the distress call and distress message consists of:

- (a) the alarm signal; followed in order by:
- (b) the distress call and an interval of two minutes;
- (c) the distress call;
- (d) the distress message;
- (e) two dashes of ten to fifteen seconds each;
- (f) the call sign of the station in distress.

However, when time is vital, the second step (b), or even the first (a) and second (b) steps, may be omitted. These two steps in the distress procedure may also be omitted in circumstances where the transmission of the alarm signal is considered unnecessary.

The distress call followed by the distress message shall be repeated at intervals, especially in the silence periods prescribed in Section 82, until an answer is received. However, the intervals shall be sufficiently long to allow time for stations preparing to reply to start their sending apparatus.

The alarm signal may also be repeated if necessary.

The transmissions under (e) and (f) are to permit direction-finding stations to determine the position of the vessel in distress and may be repeated at frequent intervals, if necessary.

When the vessel in distress receives no answer to a distress message sent on 500 kc/s, the message may be repeated on any other available frequency upon which attention might be attracted.

Before total abandonment of a ship, or an aircraft, or immediately before a forced or crash landing (on land or sea) of an aircraft, the radio apparatus should be set for continuous emission, if considered necessary and circumstances permit.

Acknowledgment of Receipt of a Distress Message

- 119.** The acknowledgment of receipt of a distress message shall be given in the following form:

- the call sign of the station sending the distress message, sent three times;
- the word DE;
- the call sign of the station acknowledging receipt, sent three times;
- the group RRR;
- the distress signal SOS.

Obligation to Acknowledge Receipt of a Distress Message

120. Stations of the mobile service which receive a distress message from a mobile station which is, beyond any possible doubt,

- (a) **in their vicinity**, must immediately acknowledge receipt; in areas where reliable communication with a coast station is practicable, ships should defer acknowledgment for a short interval to permit the coast station to acknowledge receipt;
- (b) **not in their vicinity**, must acknowledge receipt after the elapse of a short interval to permit stations nearer to the mobile station in distress to acknowledge receipt without interference.

Every mobile station acknowledging receipt of a distress message shall, upon the order of the master or person responsible for the ship or aircraft, transmit as soon as possible the following information in the order shown:

- its name;
- its position;
- the speed at which it is proceeding towards, and the approximate time it will take to reach, the mobile station in distress;

When, although not in a position to render assistance, a station of the mobile service, that has heard a distress message which has not been acknowledged, must take all possible steps to attract the attention of stations of the mobile service which might be able to render assistance.

For this purpose, with the approval of the master or person responsible for the ship, the distress call and message and the alarm signal if necessary, may be repeated (see Section 122 for the procedure to be used).

Control of Distress Traffic

- 121.** The control of distress traffic is the responsibility of the mobile station in distress, or of the station sending the distress message under the conditions outlined in Section 122. However, this control may be delegated to another station, e.g. to a coast station.

The station in distress or the station controlling distress traffic may impose silence on all stations of the mobile service or on any station which interferes with the distress traffic. It shall address this instruction to "CQ" (all stations) or to one station only, according to circumstances, followed by the signal "QRT SOS". This signal is reserved solely for the use of the station in distress and the station controlling the distress traffic.

If it believes it essential to do so, any other station of the mobile service near the station in distress may also impose silence. For this purpose the signal "QRT DISTRESS" shall be used followed by the call sign of the station making the transmission, but great care must be taken not to interfere further with distress communications already in progress.

Any station of the mobile service which has knowledge of distress traffic and cannot itself assist the station in distress shall nevertheless follow such traffic until it is evident that assistance is being provided.

Until the message indicating that normal or restricted working may be resumed is received (see below), all stations which are aware of the distress traffic, and which are not taking part in it, are forbidden to transmit on the frequencies on which distress traffic is taking place.

A station of the mobile service which, while following distress traffic, is able to continue its normal service, may do so when the distress traffic is well established and on condition that it observes the provisions of the preceding paragraph and does not interfere with the distress traffic.

In cases of exceptional importance only, and provided that no interference or delay is caused to the handling of distress traffic, the transmission of urgency or safety messages on a working frequency may be announced, preferably by coast stations, on the distress frequency during a lull in the distress traffic. In these cases the signals provided for in Section 124 and 125 should be sent once only (e.g. XXX DE ABC QSW).

When distress traffic has ceased, or when silence is no longer necessary, on the frequency which has been used for distress traffic, the station which has controlled the distress traffic shall transmit on that frequency a message addressed to "CQ" (all stations) in

the following form indicating that normal working may be resumed:

- the distress signal SOS;
- the call CQ, sent three times;
- the word DE;
- the call sign of the station sending the message;
- the time of handing-in of the message;
- the name and call sign of the mobile station which was in distress;
- the service abbreviation QUM.

Transmission of a Distress Message by a Station not Itself in Distress

122. A mobile station, or a coast station, which learns that a mobile station is in distress, shall transmit a distress message in any of the following cases

- (a) when the station in distress is not itself in a position to transmit the distress message;
- (b) when the master or person responsible for the ship or aircraft not in distress, or the person responsible for the coast station, considers that further help is necessary;
- (c) when, although not in a position to render assistance, it has heard a distress message which has not been acknowledged.

In order that direction-finding stations shall not be misled or confused in locating a mobile station in distress, any distress message transmitted by a station which is not itself in distress, must always be preceded by the following call:

- the signal DDD SOS SOS SOS DDD;
- the word DE;
- the call sign of the transmitting station, sent three times.

This call shall be preceded by the alarm signal, followed by a two minute interval when necessary.

When a distress message is transmitted under the conditions of (c) above, the station making the transmission shall take all necessary steps to notify the authorities who may be able to render assistance.

Misuse of Distress Signal

- 123.** Except in the case of distress the transmission of the distress signal is absolutely prohibited.

Difficulty has been caused by the use of the distress signal by ships which, though not in imminent danger, have utilised it for the purpose of obtaining tugs or other assistance.

The distress signal is provided for use in case of imminent danger when immediate aid is necessary. Its use for less urgent purposes might result in insufficient attention being paid to calls from ships really in immediate need of assistance.

Where the transmission of the distress signal is not fully justified, use should be made of the urgency signal (XXX) (see Section 124). This signal has priority over all other communications except distress, and should be quite sufficient for the purposes of obtaining the assistance of tugs, etc.

Urgency Signal

- 124.** The radiotelegraph urgency signal shall be sent by a ship station only on the authority of the master or person responsible for the ship, and by a coast station only with the approval of the responsible authority.

The urgency signal consists of three repetitions of the group XXX, sent with the letters of each group and the successive groups clearly separated from each other. It shall be transmitted before the call.

The urgency signal indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or the safety of a person.

The urgency signal and the message which follows it are normally sent on the international distress frequency.

The urgency signal has priority over all other communications, except distress. All stations which hear it shall take care not to interfere with the transmission of the message which follows it.

As a general rule, messages preceded by the urgency signal should be drawn up in plain language. They may be addressed to one station in particular or to "CQ" (all stations). If addressed to "CQ" the station responsible for its transmission must cancel it by a similarly addressed message as soon as it knows that action is no longer necessary.

Ship stations which hear the urgency signal must continue to listen for at least three minutes. If, at the end of this period, no urgency message has been heard, they may resume their normal service.

Coast and ship stations which are in communication on

frequencies other than the one used for the transmission of the urgency signal may continue their normal service provided that the call which follows the urgency signal is not addressed to "CQ".

Safety Signal

- 125.** The radiotelegraph safety signal consists of three repetitions of the group TTT, the individual letters of each group, and the successive groups being clearly separated from each other. It is sent before the call.

The safety signal indicates that the calling station is about to transmit a message concerning the safety of navigation or giving important meteorological warnings.

The safety signal and call are normally sent on the international distress frequency. As far as is practicable, the safety message which follows should be sent on a working frequency, particularly in areas of heavy traffic, and a suitable announcement to this effect must be made at the end of the call.

With the exception of messages transmitted at fixed times, the safety signal should be transmitted towards the end of the first available silence period and the message transmitted immediately after the silence period (see Section 82).

Meteorological and navigational warning messages must be transmitted upon receipt, and repeated as just indicated at the end of the first silence period which follows.

All stations hearing the safety signal must listen to the safety message until they are satisfied that it is of no concern to them. They shall not make any transmission likely to interfere with the message.

Medical Advice and Medical Assistance

- 126. Medical advice** can be obtained from any coast station in the United Kingdom and Irish Republic by addressing a radiotelegram to the station concerned. The coast station will communicate the message to the appropriate medical authority whose reply will be signalled to the ship.

If **medical assistance** (e.g. a doctor) from the shore is required, the request should be addressed as a radiotelegram to the Medical Officer of the most convenient port.

In both cases the messages will be exchanged free of charge.

Subject to the conditions laid down in Section 124 the use of the Urgency Signal (XXX) is proper in both cases.

Details of the facilities available to ships at sea for obtaining medical advice through the medium of the radio services of other countries are given in the List of Radiodetermination and Special Service Stations.

CHAPTER V

Procedures in the Maritime Mobile Radiotelephone Service

PART 1—GENERAL PROVISIONS

Chapter I of this Handbook deals with the general regulations and conditions to be observed by stations of the maritime mobile service. The operational efficiency and quality of the maritime radiotelephone service, no less than the radiotelegraph service, depends largely upon their strict observance. Attention is specially drawn to the following provisions.

Licence

- 127.** Under the Wireless Telegraphy Act, 1949, a licence granted by the Postmaster General is necessary before any radio apparatus is installed or used on board ship (see Section 1).

Secrecy

- 128.** All persons concerned must preserve the secrecy of correspondence. The interception of communications other than those which the station is licensed to receive, is forbidden. If such communications are received involuntarily they must not be reproduced in writing, communicated to other persons or used for any purpose whatsoever (see Section 4).

Identification of Stations

- 129.** Coast stations normally identify themselves by using their geographical names generally followed by the word "Radio", or they may use an international call sign.

United Kingdom coast stations use their geographical names followed by the word "Radio", e.g. Humber Radio.

Ship stations should normally identify themselves by the name of the ship, preceded when necessary, to avoid confusion with another ship of the same name, by the name of the owner. The international call sign assigned to the ship may be used in certain cases. The use of fishing registration numbers, christian

names and other unauthorised identifications is strictly forbidden (see also Section 24).

Transmissions by ships without identification or with false identification, as well as the transmission or circulation of false or deceptive distress, urgency or safety messages, are strictly prohibited (see Section 6).

Operators' Certificates of Competency

- 130.** The radiotelephone installation of ships taking part in the maritime radiotelephone services, in the bands between 1605 and 4000 kc/s in the exclusive maritime bands between 4 and 23 Mc/s and in the international maritime bands between 156 and 162 Mc/s must be under the control of an operator holding an appropriate certificate of competency, and an authority to operate issued by the Postmaster General. Provided that the installation is under the control of such a qualified operator, other persons may use the radiotelephone service (see Section 25).

Documents to be Carried

- 131.** The documents to be carried by ship stations are shown in Appendix 7.

Control of Communications

- 132.** Except in the case of distress, coast stations control the communications in their particular areas. In order that traffic may be exchanged efficiently, all instructions given by coast stations should be complied with at once. Ship stations must not interfere with the working of coast stations.

In the case of distress, the vessel in distress controls communications unless it hands over control to another station, e.g. to a coast station (see Section 172).

Unauthorised Transmissions and Broadcast Transmissions

- 133.** The attention of operators is called to the terms of the ship radio licence which permit a vessel whilst at sea to communicate by radio only with other ships at sea and with aircraft stations and coast stations. A ship station in harbour may not communicate with other ship stations but only with the nearest coast station, subject to the provisions of Section 15. Except in the case of emergency involving safety, the use of the trans-

mitting equipment for any other purpose is strictly forbidden.

Messages must not be transmitted to an address on shore except through a coast station. The broadcasting of messages intended for reception at addresses on shore is strictly forbidden.

Operators are also reminded that it is forbidden (a) to exchange unnecessary signals of any kind, (b) to use the installation for other than public correspondence and communications on the business of the ship, (c) to use offensive language.

Use of the ship station except in accordance with the licence is an offence under the Wireless Telegraphy Act, 1949, and may result in the revocation of the licence, or in the institution of legal proceedings, or in both. It may also lead to the suspension with a view to revocation of the operator's authority to operate a radio station on board ship.

PART 2—USE OF FREQUENCIES

General

- 134.** The frequencies for use by United Kingdom coast and ship stations are shown in Notices to Ship Wireless Stations; coast station frequencies are also shown in the List of Coast Stations.

A ship may use only those frequencies which are shown on the ship licence; the use of any other frequency is strictly forbidden.

It is important that frequencies are used only for the purpose for which they are shown in the Notices to Ship Wireless Stations, e.g. a frequency shown as for use by ships for communicating only with coast stations must not be used for communicating with other ships.

Bands between 1605 and 4000 kc/s

GENERAL PROVISION

- 135.** (1) All ship stations equipped with radiotelephony apparatus to work in the authorised bands between 1625 and 2850 kc/s must be able to:
- (a) send and receive Class A3 emissions on 2182 kc/s;
 - (b) send, in addition, class A3 emissions on at least two working frequencies;
 - (c) receive, in addition, class A3 emissions on all other frequencies necessary for their service.

The provisions of (b) and (c) do not apply to apparatus provided solely for distress, urgency and safety purposes.

Working frequencies for use by ship stations in these bands have been allotted to countries in accordance with a basic international frequency plan. A certain number are assignable to each United Kingdom ship for specific purposes, viz. ship to coast station working, intership working, etc., according to the category of the ship, i.e. fishing vessel, passenger ship and other ships.

In addition in Region I (roughly the European and African areas), the following frequencies are available for common international use by ships making international voyages, viz. 2049 kc/s for ship to coast station use and 2056 kc/s for intership use or ship to coast station use if necessary. These two frequencies listed must not be used for working between stations of the same nationality.

DISTRESS

(2) The frequency 2182 kc/s is the international distress frequency for radiotelephony. It is used for this purpose by ship, aircraft, survival craft stations using frequencies in the bands between 1605 and 4000 kc/s when requesting assistance from the maritime services. For particulars of this use see Chapter VI.

Apart from the transmissions authorised on the frequency 2182 kc/s, all transmissions on the frequencies between 2170 and 2194 kc/s are forbidden.

To facilitate the reception of distress calls all transmissions on 2182 kc/s must be kept to a minimum.

In order to increase the safety of life at sea and over the sea, all stations of the maritime mobile service normally keeping watch on frequencies in the authorised bands between 1605 and 2850 kc/s shall, during their hours of service, and as far as possible, take steps to keep watch on the international distress frequency 2182 kc/s for three minutes twice each hour beginning at x h 00 and x h 30 G.M.T. During these periods all transmissions, except those concerning distress, urgency and safety, shall cease in the band 2170 kc/s to 2194 kc/s.

WATCH

(3) Coast stations which are open to public correspondence and which form an essential part of the coverage of the area for distress purposes maintain a listening watch on 2182 kc/s during their hours of service.

United Kingdom coast stations keep a continuous watch on 2182 kc/s.

Ship stations should keep the maximum practicable watch on 2182 kc/s, especially during the periods of silence mentioned above, for the reception of the radiotelephone alarm signal and for distress, urgency and safety signals. During their hours of public correspondence service they should as far as possible listen for calls on 2182 kc/s.

FREQUENCIES TO BE USED FOR CALL AND REPLY IN THE
PUBLIC CORRESPONDENCE SERVICE

(4) The frequency 2182 kc/s is also the general calling and reply frequency for ship and coast stations using frequencies in the bands between 1605 and 4000 kc/s. However, whenever and wherever traffic density is high, a ship station calling a coast station of its own nationality for normal public correspondence traffic purposes should use a working frequency for the call, and the coast station a working frequency for the reply.

For certain hours of the day the service areas of United Kingdom coast stations are deemed to be areas of high traffic density and during these hours special calling arrangements are in force.

Details of the arrangements for calling United Kingdom coast stations, and for calling foreign coast stations and other ships, are as follows:

(a) **United Kingdom Ships to United Kingdom Coast Stations.**

During the hours indicated in the Notices to Ship Wireless Stations when the coast station area is considered to be an area of high traffic density, United Kingdom ships calling United Kingdom coast stations for normal public correspondence traffic purposes must make the call on 2381 kc/s. Outside these hours the call must be made on 2182 kc/s.

The coast stations will at all times reply on their appropriate answering frequency as indicated in the Notices to Ship Wireless Stations. If a coast station is already engaged on traffic working and is unable to reply to calls immediately, a regular announcement to this effect will be made on the appropriate answering frequency.

All coast stations will use 2182 kc/s to call individual ships for whom they might have traffic on hand between traffic list times.

When contact is established, agreement should be reached for transfer to appropriate working frequencies for the exchange of traffic.

(b) **United Kingdom Ships to Foreign Coast Stations.** United Kingdom ships should, as a general rule, call a foreign coast station on 2182 kc/s. The coast station will reply on 2182 kc/s unless the ship indicates that it will listen for the reply on one of the coast station working frequencies.

Normally foreign coast stations will call United Kingdom ships on 2182 kc/s and the ship should reply on the same frequency.

When contact is established, agreement should be reached for transfer to working frequencies for the exchange of traffic.

(c) **Ship Station to Ship Station.** A ship station may call another ship station on 2182 kc/s and the ship station called should reply on the same frequency unless reply on another frequency is indicated by the calling ship

station. Upon establishing contact transfer should be made to working frequencies for the exchange of traffic. However, in areas of high traffic density (such as around the coasts of the United Kingdom and in the North Sea) every effort should be made by ships to use an intership frequency for the call and reply when prior arrangements to do so can be made.

TRANSMISSION OF PUBLIC CORRESPONDENCE TRAFFIC

(5) Every station of the maritime mobile service should transmit its traffic (radiotelephone calls, radiotelegrams, etc.) on one of its working frequencies in the band in which the call has been made.

The use of the international calling frequency, 2182 kc/s, is forbidden for traffic except distress traffic.

(a) **United Kingdom Ships to United Kingdom Coast Stations.**

When communication is established, the ship station must transfer from 2381 kc/s or 2182 kc/s as the case may be, to a working frequency for the exchange of traffic. To facilitate this, the ship station, when offering traffic to or answering a call from a United Kingdom coast station, should indicate which working channels it has available. (See example in Section 144.) The coast station will then indicate the working frequency it will use and the working channel to be used by the ship station. Thereafter each station will listen for the exchange of traffic on the working frequencies agreed.

(b) **United Kingdom Ships to Foreign Coast Stations.** When communication is established on 2182 kc/s, transfer must be made to working frequencies for the exchange of traffic.

The coast station will indicate the working frequency it proposes to use and the ship station will indicate its agreement.

The ship station may offer:

- (a) one of its normal national working frequencies; or if available,
- (b) the international ship to shore working frequency 2049 kc/s;
- (c) the international intership/ship-to-shore frequency 2056 kc/s; or

- (d) a frequency that has been specially agreed between the United Kingdom and the administration concerned for working to the coast stations of a particular country.

When the frequency to be used is agreed by the coast station, each station from that moment onwards listens on the working frequency for the exchange of traffic.

Bands between 4000 and 23000 kc/s

- 136.** The pairs of frequencies to be used for duplex working between coast and ship stations in the exclusive maritime radiotelephone bands between 4000 and 23000 kc/s are planned internationally, and are shown in the Appendices of the Radio Regulations, Geneva, 1959. In addition, certain general calling frequencies for the use of ship stations are available and a special calling and safety frequency, 6204 kc/s, is designated for use in the Tropical Zone of Region 3 (roughly the coastal areas of South East Asia and Northern Australia).

The frequencies to be used in these bands for the establishment of communication and the handling of radiotelephone calls with the coast stations of any particular country, together with the watchkeeping hours maintained by them, are shown in the List of Coast Stations.

The general ship calling frequencies must not be used for traffic purposes.

In many cases initial contact with coast stations may be established by radiotelegraphy, in the bands appropriate for that system (see Chapter III), and transfer made direct to radiotelephone working frequencies.

Bands between 156 and 174 Mc/s

GENERAL

- 137.** (1) In the V.H.F. (Very High Frequency), or metric wave bands between 156 and 174 Mc/s international provision is made for maritime public correspondence and port operation services, and for intership working. Many coast stations conduct public correspondence radiotelephone services in these bands and port operation services are conducted in numerous harbours and ports throughout the world, often in conjunction with radar advice services.

Particulars of the frequencies in use at each station, and the purposes for which they may be used, are published in the List of Coast Stations. Particulars of the services available at United Kingdom stations are also shown in Notices to Ship Wireless

Stations and notices regarding port operation services are issued by port authorities.

All ship stations equipped to operate in these services in the authorised bands between 156 and 162 Mc/s must be able to send and receive Class F3 emissions on:

- (a) the calling and safety frequency 156.80 Mc/s;
- (b) the primary intership frequency 156.30 Mc/s;
- (c) all the frequencies necessary for their service.

The frequency channels available for these services are, by international agreement, designated by numbers, and, as far as possible, these designations should be used, e.g. 156.80 Mc/s is "Channel 16" and 156.60 Mc/s is "Channel 12".

The frequency 156.80 Mc/s (Channel 16) is designated for world-wide use for call, reply and safety purposes. In addition it may be used for messages prefixed by the urgency and safety signals and, if necessary, for distress messages.

It may also be used by coast stations to announce the transmission of a traffic list (see Section 145), or important maritime information, on a working frequency.

Apart from these transmissions the use of 156.80 Mc/s must be restricted to call and reply only.

WATCH

(2) Coast stations conducting public correspondence radiotelephone services and coast stations in the port operation services normally keep permanent watch on 156.80 Mc/s (Channel 16) during their hours of service.

Ship stations should, where practicable, maintain watch on 156.80 Mc/s (Channel 16) when within the service areas of these stations.

PUBLIC CORRESPONDENCE SERVICE

(3) As a general rule, coast and ship stations use 156.80 Mc/s (Channel 16) for calling and the reply is made on the same frequency. However, special arrangements may be made to use a working frequency, or a special two-frequency channel in some coast station areas, in which case appropriate information is published in the List of Coast Stations and, in the case of United Kingdom stations, in the Notices to Ship Wireless Stations.

Upon establishment of communication on the calling frequency, the calling station should indicate the working channel which it is proposed to use; when this is agreed both stations transfer to their working channels for the exchange of traffic.

PORT OPERATIONS SERVICE

(4) Coast and ship stations call on 156.80 Mc/s (Channel 16) and the reply is made on the same frequency.

When making a call to a port operations coast station the ship station should indicate the particular service it requires (such as navigational information, movement to docks, etc.) and the port operations coast station will indicate the appropriate working channels to be used for the service required.

When 156.80 Mc/s (Channel 16) is being used for distress, urgency or safety communications, a ship station may call a port operations coast station on 156.60 Mc/s (Channel 12), or on any other frequency published as available in that area.

INTERSHIP WORKING

(5) Contact between ship stations may be established on 156.80 Mc/s (Channel 16) and transfer made to appropriate intership working channels for the exchange of traffic.

PART 3—GENERAL PROCEDURE

GENERAL

The procedures outlined in the following sections are generally applicable in all the frequency bands in which maritime radio-telephone public correspondence services are available.

Phonetic Alphabet

- 138.** When it is necessary to spell out call signs, service abbreviations and words, etc., in international working and in working between United Kingdom ships and coast stations, the following phonetic alphabet shall be used. When language difficulties arise in international working the alphabet may also be used as indicated for the transmission of figures.

FIGURE OR MARK*	LETTER	WORD TO USED	SPOKEN AS†
1	A	Alfa	<u>AL</u> FAH
2	B	Bravo	<u>BRA</u> VOH
3	C	Charlie	<u>CHAR</u> LEE or <u>SHAR</u> LEE
4	D	Delta	<u>DELL</u> TAH
5	E	Echo	<u>ECK</u> OH
6	F	Foxtrot	<u>FOKS</u> TROT
7	G	Golf	GOLF
8	H	Hotel	HOH <u>TELL</u>
9	I	India	<u>IN</u> DEE AH
0	J	Juliett	<u>JEW</u> LEE <u>ETT</u>
Comma	K	Kilo	<u>KEY</u> LOH
Fraction Bar	L	Lima	<u>LEE</u> MAH

FIGURE OR MARK*	LETTER	WORD TO USED	SPOKEN AS†
Break Signal	M	Mike	MIKE
Full stop (Period)	N	November	NO <u>VEM</u> BER
	O	Oscar	<u>OSS</u> CAH
	P	Papa	PAH <u>PAH</u>
	Q	Quebec	KEH <u>BECK</u>
	R	Romeo	<u>ROW</u> ME OH
	S	Sierra	SEE <u>AIR</u> RAH
	T	Tango	<u>TANG</u> GO
	U	Uniform	<u>YOU</u> NEE FORM or <u>OO</u> NEE FORM
	V	Victor	<u>VIK</u> TAH
	W	Whiskey	<u>WISS</u> KEY
	X	X-ray	<u>ECKS</u> RAY
	Y	Yankee	<u>YANG</u> KEY
	Z	Zulu	<u>ZOO</u> LOO

*Each transmission of figures or marks is preceded and followed by the words “as a number” or “as a mark” respectively, spoken twice, e.g. the number 1959 will be spoken “as a number, as a number, Alfa, India, Echo, India, as a number, as a number”.

†The syllables to be emphasised are underlined.

Transmission of Figures

- 139.** In transmitting groups of figures, each figure must be spoken separately (e.g. SIX ZERO SIX *NOT* six hundred and six) and the transmission of each group or series of groups must be preceded by the words “in figures”.

The following pronunciation of figures should be observed:

FIGURE	SPOKEN AS	FIGURE	SPOKEN AS
0	ZERO	5	FIFE
1	WUN	6	SIX
2	TOO	7	SEVEN
3	THREE	8	AIT
4	FO-WER	9	NINER

Numbers, written in words, must be spoken as they are written, their transmission being preceded by the words “in letters”.

For the transmission of figures in the case of language difficulty in international working see Section 138.

Control of Working

- 140.** Except in the case of distress, urgency or safety, communications between a ship and a coast station are controlled by the coast station. Ship stations must comply with instructions given by the coast station in all questions relating to the order and time of transmission, the frequencies to be used, and the duration and suspension of working.

In communications between ship stations the ship station called controls the working, but if a coast station finds it necessary to intervene in this working both ship stations must comply with any instruction given by the coast station.

Before transmitting, a station should first listen to make sure that its emissions will not interfere with any communications already in progress; if such interference is likely, the station should await an appropriate break in those communications.

However, if after these precautions have been taken the emission does cause interference, the station causing the interference must comply with any request to suspend its transmission from the station controlling the communications in progress. The request should contain an indication of the duration of the suspension time imposed.

Apart from distress, urgency or safety communications, calling and signals preparatory to the exchange of traffic must not exceed one minute when using 2182 kc/s or 156.8 Mc/s.

Calling Procedure

- 141.** For making the call, the calling station must use a frequency on which the station called keeps watch.

As a general rule, it rests with the ship station to call and establish communication with a coast station. However, a coast station having traffic for a ship station may call that station if it has reason to believe that the ship is within its service area and is keeping watch.

(See also Section 145.)

The call consists of:

- the name or other identification of the stations called, not more than three times;
- the words THIS IS;
- the name or other identification of the calling station, not more than three times.

When contact is established, the name or other identification may thereafter be transmitted once only.

When a station called does not reply to a call sent three times at intervals of two minutes, the calling must cease. A check should be made that the correct frequencies are in use and that the station called is not in communication with another station. The call may be renewed after an interval of fifteen minutes, but, if it is sure that interference will not be caused to other communications in progress, the call may be renewed after a shorter interval, but this interval must not be less than three minutes.

However, in the bands between 1605 and 4000 kc/s, when a United Kingdom coast station cannot answer calls because it is already engaged in traffic working, it makes an announcement to this effect on the appropriate answering frequency (see Section 135). A ship station hearing such an announcement must cease calling that coast station and must not renew the calling until invited to do so by the coast station, or until it becomes evident that the coast station is no longer engaged in traffic working. It may, however, call any other United Kingdom coast station known to be within its range and free to answer calls.

Ship stations must not radiate a carrier wave between calls.

The call should be followed by an indication of the working frequency channel it is proposed to use for the exchange of traffic and whether more than one radiotelegram or radio-telephone call is to be transmitted.

When a coast station receives calls from several ship stations at practically the same time it will decide the order in which they may conduct working. Its decision will be based on the priority of the traffic to be cleared and the need to clear the greatest possible amount of traffic from each ship.

Procedure for Replying to Calls

- 142.** For transmitting the reply to a call, the station called uses the frequency upon which the calling station keeps watch, unless the calling station has specified another frequency for the reply.

The reply to a call consists of:

- the name or other identification of the calling station, not more than three times;
- the words THIS IS;
- the name or other identification of the station called, not more than three times.

If the station called is unable to accept traffic immediately, it should reply to the call as indicated above, followed by the words "WAIT MINUTES", or, if other ships are waiting, "YOUR TURN IS NUMBER". If the probable duration of the waiting time exceeds ten minutes the reason for the delay should be given.

When the called station is ready for working it will call in the form shown in Section 141 and the calling station will reply as shown above.

When a station receives a call without being certain that it is intended for it, it must not reply until the call has been repeated and understood.

When a station receives a call which is intended for it, but is uncertain of the identification of the calling station, it replies as follows:

- "STATION CALLING" (insert name or other identification of the called station), not more than three times;
- the words THIS IS;
- the name or other identification of the station called;
- "REPEAT YOUR CALL—OVER".

Agreement on the Frequency Channel to be Used for Working

- 143.** If the station called is in agreement with the working channel proposed by the calling station (see Section 141) it transmits:

- the reply to the call (see Section 142);
- an indication that from that moment onwards it will listen on the working channel announced by the calling station;
- an indication of the working frequency channel it will itself use;

- any other necessary indication;
- the word "OVER" (inviting the calling station to reply).

If the station called is not in agreement with the working frequency channel proposed, it indicates an alternative working channel for use.

When agreement is reached both stations then continue communications on the working channels.

Example of Call, Reply and Transfer to Working Frequency Channel

- 144.** The ship "SOUTHERN FOAM" wishes to clear three radiotelegrams (or radiotelephone calls) through Humber Radio.

After ascertaining that it will not interfere with any communications in progress, the ship station signals on the calling frequency:

"HUMBER RADIO (up to three times),
THIS IS,
SOUTHERN FOAM (up to three times),
I HAVE THREE RADIOTELEGRAMS FOR YOU,
CHANNEL 2 OR 6,
OVER".

The coast station is ready to receive traffic on Channel 2 and to use its working frequency 2684 kc/s, replies:

"SOUTHERN FOAM (up to three times), THIS IS
HUMBER RADIO, CHANNEL 2, LISTEN 2684 kc/s,
OVER".

The ship now transfers to Channel 2 (2016 kc/s) and the coast station to 2684 kc/s.

The ship replies on Channel 2:

"HUMBER RADIO, THIS IS SOUTHERN FOAM, HOW
ARE YOU RECEIVING ME, OVER".

The coast station replies:

"SOUTHERN FOAM, THIS IS HUMBER RADIO,
RECEIVING YOU WELL, GO AHEAD WITH YOUR
TRAFFIC, OVER".

The ship replies:

"HUMBER RADIO, THIS IS SOUTHERN FOAM",
continuing by sending his traffic (or arranging particulars of
radiotelephone calls).

Coast Station Traffic Lists

- 145.** Coast stations normally call ship stations in the form of "Traffic Lists", consisting of the names or other identifications of all ships for which traffic is held by the coast station. These lists are transmitted on the normal working frequency of the station at intervals of approximately two hours; the times and working frequencies for each coast station are shown in Notices to Ship Wireless Stations and in the List of Coast Stations.

These traffic lists are usually preceded by an announcement on the calling frequency in the following form:

- HULLO ALL STATIONS (not more than three times);
- THIS IS,
- RADIO (not more than three times),
- LISTEN FOR MY TRAFFIC LIST ON . . . KC/S.

Ship stations should, as far as possible, listen to the traffic lists transmitted by coast stations, and upon hearing their name or other identification in such a list must reply to the coast station as soon as they can do so. If the coast station cannot send the traffic immediately it will indicate the turn or the probable waiting time (see Section 142).

Signal for End of Work

- 146.** The end of work between two stations is indicated by each station adding the word "OUT" at the end of its last reply.

Failure to Establish Communication with a United Kingdom Coast Station

- 147.** When a ship station passes within the service area of a United Kingdom coast station and is prevented for any reason from communicating with that station, it is the responsibility of the ship station to secure the redirection of any traffic held for the ship by that coast station, through the first United Kingdom coast station with which communication is established.

Information to be Furnished by a Ship Station (TR)

- 148.** In order to facilitate the routing of traffic, ship stations should furnish coast stations with particulars of their voyages. This information, which is given under the authority of the master or person responsible for the ship, should be prefixed by the abbreviation "TR". The information should be supplied to coast stations in the United Kingdom and the Irish Republic without waiting for a request to do so.

The TR comprises:

- the name of the ship;
- the approximate distance, in nautical miles, and bearing of the ship from the coast station or a known geographical location, or the position in latitude and longitude;
- the next port of call.

Closure of Service on Ship Stations

- 149.** Ship stations whose service is not continuous must not close before:
- (a) finishing all operations resulting from a distress call, urgency or safety signal;
 - (b) exchanging, as far as practicable, all traffic originating in or destined for coast stations within their service area, or for other ships known to be within their area.

Arrival in, and Departure from, Port

- 150.** Any ship station arriving at an intermediate or terminal port and about to close its service, must:
- (a) notify accordingly the nearest coast station, and if appropriate, any other coast station with which it generally communicates;
 - (b) not close until after the disposal of traffic on hand, unless this conflicts with the regulations in force in the country of the port of call.

Upon departure from port the ship station must notify the coast stations concerned as soon as its service reopens.

Transmission of Test Signals

- 151.** When it is necessary for a ship station to send signals, for testing or adjustments, which are liable to interfere with the working of

neighbouring coast stations, the consent of these stations must be obtained before such signals are sent.

Test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, must not be continued for more than ten seconds, and must include the name or other identification of the station emitting the signals. The name or other identification must be spoken slowly and distinctly.

Any signals sent for testing shall be kept to a minimum, particularly on 2182 kc/s and 156.80 Mc/s (Channel 16).

A listening watch must always be set on the appropriate frequency before testing in order to guard against interfering with any transmission that might be in progress.

Port Operations Service

- 152.** Communications in the port operations service in the bands between 156 and 162 Mc/s must be restricted to those relating to the movement and the safety of ships and, in emergency, to the safety of persons.

Ship stations should adhere to the instructions published concerning the method of use of single-frequency (simplex) or two-frequency (duplex) working channels (see Section 137).

PART 4—TRANSMISSION OF RADIOTELEGRAMS

General

- 153.** Radiotelegrams must be transmitted in the order of priority given in Section 20; radiotelegrams of the same order of priority should be transmitted in the progressive order of their times of handing-in.

In communications between a coast station and a ship station, the coast station decides the order of working; in communications between two ship stations the decision rests with the ship which is called.

In routing radiotelegrams, a ship station should, as a general rule, give preference to the coast station established on the territory of the country of destination, or the country likely to provide the most suitable transit route for radiotelegrams.

If a ship station is unable to dispose of a radiotelegram direct to a coast station it may relay it via another ship station free of charge provided the latter consents. The ship relaying the radiotelegram disposes of it in the same manner as if it originated with itself, noting at the end of the preamble that it has been relayed "Via " (name of relaying ship).

Radiotelegrams must be numbered in a separate daily series to each station. Number 1 is given to the first radiotelegram sent each day, commencing at 0001 G.M.T., to each separate station. The same series of numbers is used for radiotelegrams whether sent by radiotelephony or radiotelegraphy.

Ship stations should check that radio telegrams received from each coast and ship station are consecutively numbered in each separate series.

In case of subsequent enquiry any particular radiotelegram may be referred to by its number in a series.

For the formation and explanation of the different parts of a radiotelegram see Section 31.

Form of Transmission of a Radiotelegram

- 154.** When communication has been established between two stations on working frequencies, and working procedure agreed, the transmission of a radiotelegram is preceded by:
- the name, or other identification of the receiving station;

- the words THIS IS;
- the name or other identification of the sending station;

The transmission of a radiotelegram is commenced by the spoken words "Radiotelegram begins" and is terminated by the spoken words "Radiotelegram ends".

The radiotelegram must be sent in the following order:

- Commencing signal ("Radiotelegram begins").
- Name of the ship of origin (office of origin if originating on land).
- Serial number of radiotelegram.
- Number of words.
- Date.
- Time of handing-in.
- Service instructions, such as routing instructions (if any).
- Supplementary instructions, such as "Reply Paid" (if any).
- Address.
- Text; (if no signature follows send finishing signal here).
- Signature (if any).
- Finishing signal ("Radiotelegram ends").

A radiotelegram should be sent slowly, allowing sufficient time for it to be copied at the receiving station, and each word spoken distinctly.

If the radiotelegram contains figures, secret language, difficult or exceptional words, these should be repeated at the end to make sure of correct reception, if necessary, by using the spelling table shown in Section 138, or the whole radiotelegram may be repeated if considered desirable. Such repetition should be given after the finishing signal ("Radiotelegram ends") and should be preceded by the spoken words "I REPEAT".

Where figures occur in the address or text of a radiotelegram they should be spoken separately and should be preceded by the words "In figures", e.g. "42 crans" should be spoken "IN FIGURES, FOUR TWO CRANS".

If a number is written in letters it should be spoken as it is written and preceded by the words "In letters", e.g. "forty-two crans" should be spoken "IN LETTERS FORTYTWO CRANS".

If the receiving station requires the repetition of the whole or any part of the radiotelegram it will request the sending station to repeat what is required.

If the receiving station is doubtful about the accuracy of the whole or any part of the radiotelegram it may repeat it back to the sending station, preceding the repetition with the spoken words "REPEAT FOR CHECK", followed by the repetition. The sending station should check this repetition carefully and if it is correctly repeated should indicate this to the receiving station by the word "CORRECT".

Acknowledgment of Receipt

155. When the receiving station has received the radiotelegram correctly it replies:

- name or other identification of the sending station;
- the words THIS IS;
- name or other identification of the receiving station;
- "YOUR NUMBER (serial number of radiotelegram) RECEIVED, OVER",

or

- "YOUR NUMBER TO NUMBER RECEIVED, OVER", (if several radiotelegrams are sent in a series)

A sending station must not consider a radiotelegram as cleared and disposed of until a proper acknowledgment of receipt from the receiving station has been duly received.

Example of Transmission of a Radiotelegram

156. The ship "SOUTHERN FOAM" has established communication on working frequencies with Humber Radio, and has advised that station that it wishes to send one radiotelegram.

Humber Radio replies:

"SOUTHERN FOAM, THIS IS HUMBER RADIO — SEND YOUR RADIOTELEGRAM — OVER".

"Southern Foam" replies:

"HUMBER RADIO, THIS IS SOUTHERN FOAM — RADIOTELEGRAM BEGINS — FROM SOUTHERN FOAM — NUMBER 2 — NUMBER OF WORDS 8 — DATE 14TH — TIME 1130 — ADDRESS — SMITH GRIMSBY — TEXT — EXPECT DOCK FRIDAY NOON TIDE — SIGNATURE — MASTER — RADIO-TELEGRAM ENDS — OVER".

Humber Radio replies:

" SOUTHERN FOAM, THIS IS HUMBER RADIO —
YOUR NUMBER 2 RECEIVED — OUT"

" Southern Foam" replies:

"HUMBER RADIO, THIS IS SOUTHERN FOAM —
OUT".

(A slight pause should be made where indicated by dashes.)

Communication between the two stations is now finished.

Procedure when Communication becomes Difficult

157. When communication between a ship station and a coast station becomes difficult, every effort should be made to complete the radiotelegram in course of transmission. If this is not possible the radiotelegram should be held until a favourable opportunity occurs. If it is doubtful whether communication can be re-established within twenty-four hours, e.g. in the case of a ship station passing out of the service area of a coast station, the sender should be advised immediately of the reason for the non-transmission of the radiotelegram. The sender may then request:

- that the radiotelegram be transmitted through another coast station; or
- that the radiotelegram be held until it can be transmitted without additional charge ; or
- that the radiotelegram be cancelled.

When a ship station subsequently transmits a radiotelegram to the coast station which incompletely received it, care should be taken to make known to the coast station that its transmission had previously been commenced in order that additional charges do not become involved. This must be indicated by adding the word "ampliation" in the preamble of the radiotelegram. If, however, the radiotelegram is subsequently transmitted to another coast station of the same administration or private enterprise, the new transmission must bear the service instruction "ampliation via " (insert the name of the coast station to which the radiotelegram was transmitted in the first instance) in the preamble of the radiotelegram.

A station which has received a radiotelegram and has been unable to acknowledge its receipt in the usual way, must take the first favourable opportunity to give such acknowledgment. When this acknowledgment cannot be given direct to the station that transmitted the radiotelegram, it may be forwarded by service

advice through another ship, or through another coast station of the same administration. In any case no additional charge must result.

Preamble for Inland Transmission from Coast Stations

158. 167. When a coast station sends over the inland telecommunication network a radiotelegram received from a ship station, it inserts after the name of the ship of origin the name of the coast station and the name of the last ship which acted as intermediary (should any re-transmission have occurred).

In order to avoid any confusion with a telegraph office or a fixed station of the same name, the coast station may, if desirable, complete the indication of the name of the ship of origin by the word "ship" placed before the name of the station of origin.

PART 5—ESTABLISHMENT OF RADIOTELEPHONE CALLS

General

- 159.** For particulars of the types of radiotelephone call available in the public correspondence service between ship stations and subscribers on land see Section 73.

Stations taking part in this public correspondence service must be equipped with devices for instantaneous switching from transmission to reception and vice versa. The service on ship stations should, as far as possible, be operated on a duplex basis.

Setting up a Radiotelephone Call

- 160.** When communication has been established between a ship station and a coast station on working frequencies and the ship station wishes to establish a call to a subscriber on land, the ship station signals:

- the name or other identification of the coast station;
- the words THIS IS;
- the name or other identification of the ship station;
- "I HAVE A CALL FOR (telephone exchange and number, spoken twice), OVER".

The coast station will reply requesting the ship station to "STAND BY" and will proceed to establish connection with the telephone network as quickly as possible. The ship station will continue to listen on the coast station working frequency until the required telephone subscriber is secured.

When the subscriber is secured, the coast station will say to the ship station "YOU ARE CONNECTED TO (telephone exchange and number), GO AHEAD". The ship station will then continue with the call to the land subscriber.

If for any reason the connection cannot be quickly established, the coast station will inform the ship station accordingly. The ship station will then either continue to listen until an effective connection can be established or call the coast station later at a mutually agreed time.

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The coast station will decide the duration of the call for charging purposes and will normally inform the ship station of that duration immediately the conversation with the land subscriber ceases.

CHAPTER VI

Distress, Urgency, Safety and Medical Communications by Radiotelephony

General

- 161.** An extensive international organisation exists for assisting vessels in distress. By taking part in this organisation and following the procedure laid down subsequent sections, all ships can help to ensure that such vessels obtain assistance without delay. However, nothing in this procedure prevents a ship in distress from making use of any means at its disposal to attract attention, make known its position and obtain help.

The radiotelephone alarm signal, the distress call and the distress message shall be sent only on the authority of the master or person responsible for the ship.

In cases of distress, urgency and safety, transmissions must be made slowly and distinctly, each word being clearly pronounced.

Extreme care should be taken by all stations taking part in distress communications to ensure that their transmissions do not cause harmful interference to the other stations engaged, especially to the transmissions of the station actually in distress.

Distress Frequency

- 162.** The frequency 2182 kc/s is the international distress frequency for radiotelephony; it must be used for this purpose by ship, aircraft and survival craft using frequencies in the authorised bands between 1605 and 4000 kc/s .when requesting assistance from the maritime services. It is used for the distress call and distress traffic, for the urgency signal and urgency messages and for the safety signal. Safety messages should be transmitted, where practicable, on a working frequency after a preliminary announcement on 2182 kc/s.

United Kingdom coast stations keep continuous watch on 2182 kc/s as also do many foreign coast stations.

In the interests of safety of life at sea, all ships fitted solely with radiotelephony should keep the maximum watch practicable on 2182 kc/s. When a continuous watch is not practicable, ships should, as far as possible, listen on 2182 kc/s twice each hour for

Three minutes commencing at the hour and half hour. During these three-minute periods, all transmissions on 2182 kc/s, except distress, urgency and safety communications, must cease.

Alarm Signals

- 163.** The radiotelephone alarm signal consists of two audio frequency tones (one of 2200 and the other of 1300 c/s) transmitted alternately, giving a distinctive warbling sound, which can be distinguished by ear through heavy interference.

When generated automatically the signal should be sent continuously for a period of at least thirty seconds but not longer than one minute. When generated by any other means it should be sent as continuously as practicable for a period of approximately one minute.

The purpose of this signal is to attract the attention of the person on watch, or to actuate automatic devices giving the alarm.

It must be used only:

- (a) to announce that a distress call or message is about to follow;
- (b) by a duly authorised coast station to announce that an urgent cyclone warning is to be transmitted
- (c) to announce the loss of a person or persons overboard when the assistance of other ships is required and cannot be obtained satisfactorily by the use of the urgency signal only.

In the case described in (c), the alarm signal must not be repeated by other stations and the message which follows must be preceded by the urgency signal (see Section 175).

Distress Signal

- 164.** The radiotelephone distress signal consists of the word MAYDAY pronounced as the French expression "m'aider".

This signal indicates that a ship or an aircraft is threatened by grave and imminent danger and requests immediate assistance.

Distress Call

- 165.** The radiotelephone distress call consists of:
- the distress signal MAYDAY, spoken three times;
 - the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
 - the name, or other identification, of the station in distress, spoken three times.

This call has absolute priority over all other transmissions. All stations hearing it, or the alarm signal preceding it, must immediately cease any transmission which could cause interference to the distress traffic, and continue to listen on the frequency for the sending of the distress message which follows.

Distress Message

166. The distress message consists of:

- the distress signal MAYDAY;
- the name, or other identification, of the mobile station in distress;
- particulars of its position;
- the nature of the distress and the kind of assistance desired;
- any other information which might facilitate the rescue.

The position of the ship should be given in terms of latitude and longitude, or whenever practicable, as a true bearing and distance from a known geographical point. If, however, the vessel is in distress on a rock or shoal, or near a headland or other place, a precise geographical indication of the position should be given in order that the place cannot be confused with any other place or part of the coast, e.g. "near the Skerries off Holyhead". If drifting, the master should, if possible, also state the direction and rate of drift.

Distress Call and Message Transmission Procedure

167. The radiotelephone distress procedure consists of:

- the alarm signal (whenever possible) followed by:
- the distress call;
- the distress message.

The distress message, preceded by the distress call, and the alarm signal if possible, shall be repeated at intervals, especially during the periods of silence mentioned in Sections 143 and 171, until an answer is received.

When the station in distress receives no answer to a distress message sent on a distress frequency, the message may be repeated on any other available frequency upon which attention might be attracted.

After the transmission of its distress message, the station may be requested to transmit suitable signals, followed by its name

or other identification, to permit direction-finding stations to determine its position. This request may be repeated at frequent intervals if necessary.

Example of Distress Procedure

168. In this example it is assumed that the vessel "NONSUCH" has struck a rock and is in danger of sinking.

The master or person responsible for the "NONSUCH" having given the authority, the following is a list of the items, with the example opposite each item, comprising the complete distress call and message that the vessel will send out on 2182 kc/s:

ITEM	EXAMPLE (Read down the columns)
The alarm signal	One minute transmission of the alarm signal, if possible, then the following spoken:
The distress call	
—distress signal (three times)	MAYDAY MAYDAY MAYDAY
—the words THIS IS	THIS IS
—the name of the ship (three times)	NONSUCH NONSUCH NONSUCH
The distress message	
—distress signal	MAYDAY
—name of the ship	NONSUCH
—position	NEAR SKERRIES OFF HOLYHEAD
—nature of distress and assistance required	STRUCK ROCK AND IN SINKING CONDITION REQUIRE IMMEDIATE ASSISTANCE
—other information to help rescue ships	WILL FIRE A DISTRESS ROCKET AT INTERVALS
—invitation to reply and acknowledge	OVER,

Acknowledgment of Receipt of a Distress Message

169. The acknowledgment of receipt of a distress message is given in the following form:

- the distress signal MAYDAY;
- the name or other identification, of the station sending the distress message, spoken three times;
- the words THIS IS;
- the name, or other identification, of the station acknowledging receipt, spoken three times;
- the word RECEIVED;
- the distress signal MAYDAY.

EXAMPLE:

MAYDAY NONSUCH NONSUCH NONSUCH
THIS IS
SOUTHERN FOAM SOUTHERN FOAM
SOUTHERN FOAM
RECEIVED MAYDAY

Obligation to Acknowledge Receipt of a Distress Message

170. Ships which receive a distress message from a mobile station:

- (a) **in their immediate vicinity** must acknowledge receipt immediately. However, in areas where reliable communication with a coast station is practicable, the acknowledgment may be deferred for a short interval to allow the coast station to acknowledge receipt without interference;
- (b) **not in their immediate vicinity** should allow a short interval to elapse before acknowledging, to permit ships nearer to the mobile station in distress and thus more able to render assistance, to acknowledge receipt.

Any ship acknowledging receipt of a distress message must, upon the order of the master or person responsible, communicate as soon as possible its name, its position, the speed at which it is proceeding towards, and the time it will take to reach the mobile station in distress.

When, although not in a position to render assistance, a station of the mobile service that has heard a distress message which has not been acknowledged must take all possible steps to attract the attention of stations of the mobile service which might be able to render assistance

For this purpose, with the approval of the master or person responsible for the ship or aircraft, the distress call and message, and the alarm signal if necessary, may be repeated. (See Section 173 for the procedure to be used.)

Distress Traffic

- 171.** Distress traffic consists of all communications concerned with rendering immediate assistance to the mobile station in distress; the distress signal (MAYDAY) should be sent before each call and before each message concerned.

Control of Distress Traffic

- 172.** The control of distress traffic is the responsibility of the ship in distress or of the station sending a distress message under the conditions outlined in Section 173. However, this responsibility may be delegated to another station, e.g. to a coast station.

The ship in distress, or the station controlling the distress traffic, may impose silence on all stations, or on any one station, according to circumstances, by sending the instruction "SEELONCE MAYDAY" followed by its own name or other identification on the frequency being used for distress purposes. No other station may use this expression.

If any other station near the mobile station in distress believes it essential to do so, it may similarly impose silence, but in this case it must use the expression "SEELONCE DISTRESS" followed by its own name or other identification.

Any ship which has knowledge of distress traffic and cannot itself render assistance must follow such traffic until it is evident that assistance is being provided.

All ships which are aware of distress traffic, and are not taking part in it, are forbidden to transmit on a frequency being used for distress traffic.

When the distress traffic has ceased, or when silence is no longer necessary, on the frequency which has been used for distress traffic, the station which has controlled the distress traffic must let all stations know that normal working may be resumed. This is done by sending a message in the following form to "all stations".

- the distress signal MAYDAY;
- the call to "All Stations", spoken three times;
- the words THIS IS;

- the name, or other identification, of the station sending the message;
- the time of handing-in of the message;
- the name, or other identification, of the station which was in distress;
- the words "SEELONCE FEENEE".

Transmission of a Distress Message by a Station Not Itself in Distress

173. A ship station or a coast station which learns that a mobile station is in distress, shall transmit a distress message in any of the following cases:

- (a) when the station in distress cannot itself transmit a distress message;
- (b) when the master or person responsible for a ship not in distress, or the person responsible for the coast station, considers that further help is necessary;
- (c) when, although not in a position to render assistance, it has heard a distress message which has not been acknowledged (see Section 170).

It is important that it is made quite clear when a distress message is transmitted by a station not itself in distress. If this is not done, direction-finding bearings might be taken on the position of the station making this transmission and assistance could thereby be directed to the wrong position. Therefore in the cases mentioned in (a), (b) and (c) above, where the stations sending the distress message are not actually in distress themselves, and in any other circumstances where a distress message might be repeated by a station not itself in distress, the transmission of the distress message must always be preceded by the following call, which is preceded by the alarm signal, when possible:

- the signal MAYDAY RELAY, spoken three times; —the words THIS IS;
- the name, or other identification, of the station making the transmission, spoken three times.

Misuse of Distress Signal

174. Except in the case of distress the use of the distress signal is absolutely forbidden.

The distress signal is provided for use in cases of imminent danger when immediate aid is necessary. Its use for less urgent purposes might result in insufficient attention being paid to calls made from ships who really require immediate assistance.

Where the sending of the distress signal is not fully justified use should be made of the urgency signal (PAN, see Section 175) which has priority over all other communications except distress.

Urgency Signal

175. The radiotelephone urgency signal is sent only on the authority of the master or person responsible for the ship.

It consists of the word PAN sent three times before the call and indicates that the station sending it has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or the safety of a person.

The urgency signal and the message which follows are normally sent on the international distress frequency. The message may be addressed to a particular station or to "all stations". If addressed to "all stations" the station sending it must cancel it by a similarly addressed message when action is no longer necessary.

The urgency signal has priority over all other communications except distress. All stations hearing it must avoid interfering with the message which follows.

Ships hearing an urgency signal must continue to listen for at least three minutes. If, at the end of that period, no urgency message has been heard then normal working may be resumed.

Example of Urgency Call and Message

176. The following is an example of an urgency call and message from the vessel "Nonsuch" which has lost its propeller and urgently requires a tow:

ITEM	EXAMPLE
(Read down the columns)	
Urgency signal (three times)	PAN PAN PAN
The call	
(a) name of station called (up to three times)	HULLO ALL STATIONS HULLO ALL STATIONS HULLO ALL STATIONS

ITEM	EXAMPLE
(Read down the columns)	
(b) the words THIS IS	THIS IS
(c) name of the calling station (up to three times)	NONSUCH NONSUCH NONSUCH
The urgency message	30 MILES DUE EAST OF FLAMBOROUGH HEAD LOST PROPELLER DRIFTING EAST SOUTH EAST AT TWO KNOTS REQUIRE TOW UR- GENTLY OVER

Safety Signal

- 177.** The radiotelephone safety signal consists of the word SECURITE (pronounced SAY-CURE-E-TAY) sent three times before the call and indicates that the station is about to transmit a message concerning the safety of navigation, or giving a gale warning, etc.

The safety signal and the call are normally sent on the international distress frequency, but the message which follows is normally sent on a working frequency after an appropriate announcement on the distress frequency.

With the exception of messages transmitted at fixed times, the safety signal should be transmitted towards the end of the first available silence period and the message transmitted immediately after the silence period (see Section 135).

All stations should avoid causing interference to these transmissions and should listen to the safety message until they are satisfied that it is of no concern to them.

Medical Advice and Medical Assistance

- 178. Medical advice** can be obtained from any coast station in the United Kingdom and the Irish Republic. The coast station will either send a message to the appropriate medical authority and communicate the reply to the ship, or the ship radiotelephone call will be extended to the appropriate medical authority.

If **medical assistance** (e.g. a doctor) from the shore is required, the request should be made to the Port Medical Officer at the most convenient port.

In both cases the telephone call and any necessary messages will be exchanged free of charge.

The use of the Urgency Signal is proper in such cases.

Medical advice is normally available to ships at sea also through the coast stations of other countries, details of which are published in the List of Radiodetermination and Special Service Stations.

CHAPTER VII

Radionavigational Services

Radiodetermination Services

- 179.** Administrations which operate radiodetermination stations providing services of value to the maritime mobile service notify the particulars and characteristics of their stations for publication in the List of Radiodetermination and Special Service Stations. Administrations take steps to ensure the effectiveness and regularity of their services, but accept no responsibility for the consequences that might arise from the use of inaccurate information furnished, defective working or failure of their stations.

Information concerning modification or irregularity of working of a radiodetermination station is sent out by the appropriate coast stations daily, if necessary, until such time as normal working is restored, or, if a permanent alteration has been made, until such time as it can reasonably be taken that all navigators interested have been warned.

Permanent alterations, or irregularities of long duration, are published as soon as possible in the appropriate notices to navigators.

Radio Direction-finding

- 180.** Particulars of coastal radio direction-finding stations, including the sectors in which bearings are normally reliable, are published in the List of Radiodetermination and Special Service Stations. Before calling one or more radio direction-finding stations for the purpose of asking for a bearing or position, a ship station should obtain the necessary information regarding call signs or other identifications, watch frequencies, grouping of stations, etc., from this List.

The radiotelegraph frequency normally used for radio direction-finding in the maritime radionavigation service is 410 kc/s. All stations taking part in this service must be able to use this frequency. In addition, they must be able to take bearings on 500 kc/s, especially for locating stations sending signals of distress, alarm and urgency.

Where a radio direction-finding service is provided in the

authorised bands between 1605 and 2850 kc/s, radio direction-finding stations should be able to take bearings on the radio-telephone distress and calling frequency, 2182 kc/s.

The procedure for obtaining radio direction-finding bearings and positions is given in Appendix 8.

For the relative priority of communications concerned with radio direction-finding see Section 20.

Radiobeacon Stations

- 181.** Particulars of radiobeacon stations for use by the maritime services are published in the List of Radiodetermination and Special Service Stations.

In the bands between 285 and 315 kc/s, the maritime radiobeacon stations controlled by a large number of the administrations of the European Maritime Area (including the United Kingdom and the Irish Republic) operate on an internationally agreed frequency sharing plan, which allows a group of up to six different radiobeacons to transmit on the same frequency.

The grouping of the radiobeacon stations is planned to facilitate the taking of cross-bearings and in some cases will include radiobeacons controlled by more than one administration inside the same group.

These radiobeacon stations transmit consecutively during a six minute cycle in an agreed order according to the number of stations inside the group, a standardised type of characteristic signal, e.g. if there are six radiobeacon stations in the group, each station transmits its characteristic signal for one minute, in turn, in each six minute cycle; if there are three stations in the group, either the first station transmits for the first and fourth minute, the next for the second and fifth minutes and the last for the third and sixth minutes, or, the first transmits for the first two minutes, the second for the next two minutes and the third for the last two minutes of the six minute cycle.

Meteorological Information

- 182.** Particulars of stations sending out meteorological bulletins at fixed times are given in the List of Radiodetermination and Special Service Stations.

Particulars of meteorological bulletins, intended for reception by ships, sent out by coast stations in the United Kingdom and the Irish Republic, are also published in Notices to Ship Wireless Stations.

Meteorological warning messages (gale warnings etc.) intended for reception by ships, are sent out by certain coast stations in

the United Kingdom and Irish Republic at the end of the first silence period following their receipt, and the first succeeding scheduled time shown in Notices to Ship Wireless Stations.

Meteorological warning messages are prefixed by the safety signal and are normally transmitted on a working frequency after a preliminary announcement on the appropriate calling and distress frequency.

During the transmission of meteorological bulletins and warning messages intended for reception by ship stations, all stations of the maritime service whose transmissions might interfere with the reception of these messages must keep silent in order to permit all stations which desire to do so to receive these messages.

A special meteorological forecast for shipping for any area between parallels 35 degrees and 65 degrees North, and the meridian 40 degrees West and the coasts of the European Continent, for periods up to 36 hours, may be obtained at any time on request from a United Kingdom coast station. The request should be addressed to the coast station and should state the required period, the required area and the ship's name.

The request will be sent to the Meteorological Office at Dunstable and the reply sent to the ship by the coast station as soon as possible. A standard charge will be made for the inland telegraph service.

Example of Request Message:

"ANGLESEY RADIO = INDICATE WEATHER
FORECAST FOR NEXT 12 HOURS IRISH SEA =
SOUTHERN FOAM".

Any ship station may, for its own use, listen to messages containing meteorological observations sent out by other ship stations, even those which are addressed to a national meteorological service. Ship stations which transmit meteorological observations addressed to a national meteorological service are not required to repeat them to other stations; however, exchange of information relating to the weather is authorised between ship stations.

Messages originating in ship stations containing information concerning the presence of cyclones must be transmitted with the least possible delay to other ship stations in the vicinity and to the appropriate authorities at the first point of the coast with which contact can be established. Their transmission is preceded by the safety signal.

Notices to Mariners

- 183.** Particulars of stations making regular transmissions of navigational information for the benefit of mariners are published in the List of Radiodetermination and Special Service Stations.

Particulars of the transmissions made from coast stations in the United Kingdom and Irish Republic are also published in the Notices to Ship Wireless Stations.

The transmissions are prefixed by the safety signal and are normally sent on a working frequency after a preliminary announcement on the appropriate calling and distress frequency.

Messages containing information concerning the presence of dangerous ice, dangerous wrecks, or any other imminent danger to marine navigation, must be transmitted as soon as possible to other ship stations in the vicinity, and to the appropriate authorities at the first point of the coast with which contact can be established. These transmissions should be preceded by the safety signal.

During the transmission of navigational information, all stations of the maritime mobile service should avoid making transmissions which might interfere with the reception of the information by stations desiring to receive it

APPENDIX 1

International Morse Code Signals

LETTERS

a	· —
ä	· — · —
á or å	· — — — · —
b	— · · ·
c	— · — ·
ch	— — — —
d	— · ·
e	·
é	· — — · ·
f	· — · —
g	— — ·
h	· · · ·
i	· ·
j	· — — —
k	— · —
l	· — · ·
m	— —
n	— ·
ñ	— — · — —
o	— — —
ö	— — — ·
p	· — — ·
q	— — — ·
r	· — ·
s	· · ·
t	—
u	· · —
ü	· · — —
v	· · · —
w	· — —
x	— · · —
y	— · — —
z	— — · ·

Spacing and length of the signals:

(a) a dash is equal to three dots;

(b) the space between the signals forming the same letter is equal to one dot;

(c) the space between two letters is equal to three dots;

(d) the space between two words is equal to seven dots.

FIGURES

1	· - - - -
2	· · - - -
3	· · · - -
4	· · · · -
5	· · · · ·
6	- · · · ·
7	- · - · ·
8	- - · - ·
9	- - - · ·
0	- - - - -

In routine repetitions, if there can be no misunderstanding on consequence of the presence together of figures and letters or groups of letters, figures may be rendered by means of the following abbreviated signals:

1	· -
2	· · -
3	· · · -
4	· · · · -
5	· · · · ·
6	- · · · ·
7	- · - · ·
8	- - · - ·
9	- - - · ·
0	- - - - -

PUNCTUATION AND OTHER SIGNS

Full stop (period)	..	..	..	..	(.)	· - - - -
Comma	..	..	..	..	(,)	- · - - -
Colon or division sign	..	..	..	..	(:)	- - - · ·

Question mark (note of interrogation or request for repetition of a transmission not understood)	(?)	..-.-.-.-.
Apostrophe	(')	..-.-.-.-.
Hyphen or dash or subtraction sign	(-)	..-.-.-.-.
Fraction bar or division sign	(/)	..-.-.-.-.
Lefthand bracket (parenthesis)	[(]	..-.-.-.-.
Righthand bracket (parenthesis)	[)]	..-.-.-.-.
Inverted commas (quotation marks) (before and after the words)	(“ ”)	..-.-.-.-.
Double hyphen	(=)	..-.-.-.-.
Understood		..-.-.-.-.
Error		..-.-.-.-.
Cross or addition sign		..-.-.-.-.
Invitation to transmit		..-.-.-.-.
Wait		..-.-.-.-.
End of Work		..-.-.-.-.
Commencing signal		..-.-.-.-.
Multiplication sign		..-.-.-.-.

In order to avoid all possible confusion in transmitting fractional numbers, the fraction must be preceded or followed, as the case may be, by a dash.

Examples: for 2% transmit 2-0/0 and not 20/0

for 4½ % transmit 4-1/2-0/0 and not 41/20/0

for ¾8 transmit 3/4-8 and not 3/48

The minute sign (') and the second sign (") shall be transmitted by means of the apostrophe sign, transmitted once for the minute sign and twice for the second sign.

APPENDIX 2

**Abbreviations and Signals to be used
for Radiocommunications**

PART 1—Q CODE

- (1) The series of groups QRA to QVZ, listed in this Appendix, are for use by all services.
- (2) The QAA to QNZ series are reserved for the aeronautical service and the QOA to QQZ series are reserved for the maritime services. These series are not listed in this Handbook.
- (3) Certain Q code abbreviations may be given an affirmative or negative sense by sending YES or NO respectively, immediately following the abbreviation.
- (4) The meanings assigned to Q code abbreviations may be amplified or completed by the appropriate addition of other groups, call signs, place names, figures, numbers, etc. It is optional to fill in the blanks shown in parentheses. Any data which is filled in where blanks appear shall be sent in the same order as shown in the text of the following tables.
- (5) Q Code abbreviations are given the form of a question when followed by a question mark. When an abbreviation is used as a question and is followed by additional or complementary information, the question mark should follow this information.
- (6) Q code abbreviations with numbered alternative significations shall be followed by the appropriate figure to indicate the exact meaning intended. This figure shall be sent immediately following the abbreviation.
- (7) All times shall be given in Greenwich Mean Time (G.M.T.) unless otherwise indicated in the question or reply.

Abbreviations Available for the All Services

A . LIST OF ABBREVIATIONS IN ALPHABETICAL ORDER

Abbre- viation	Question	Answer or Advice
QRA	What is the name of your station?	The name of my station is . . .
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles

Abbreviation	Question	Answer or Advice
		(or kilometres)

Abbreviation	Question	Answer or Advice
QRC	By what private enterprise (<i>or</i> State Administration) are the accounts for charges for your station settled?	The accounts for charges of my station are settled by the private enterprise . . . (or State Administration)
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .
QRE	What is your estimated time of arrival at (or over . . .) . . . (place)?	My estimated time of arrival at . . . (or over . . .) (place) is . . . hours.
QRF	Are you returning to . . . (place)?	I am returning to . . . (place) (or) Return to . . . (place)
QRG	Will you tell me my exact frequency (or that of . . .)?	Your exact frequency (or that of . . .) is . . . kc/s (or Mc/s).
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is . . . 1. Good 2. Variable 3. bad.
QRJ	How many radiotelephone calls have you to book?	I have . . . radiotelephone calls to book.
QRK	What is the intelligibility of my signals (or those of . . .)?	The intelligibility of your signals (or those of . . .) is . . . 1. bad 2. Poor 3. Fair 4. Good 5. excellent.
QRL	Are you busy?	I am busy (or I am busy with . . .) Please do not interfere.
QRM	Are you being interfered with?	I am being interfered with (1. nil 2. slightly 3. moderately 4. severely 5. extremely).
QRN	Are you troubled by static?	I am troubled by static . . . (1. nil 2. Slightly 3. Moderately 4. Severely)

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Abbreviation	Question	Answer or Advice
QRO	Shall I increase transmitter power?	5. extremely). Increase transmitter power
QRP	Shall I decrease transmitter power?	Decrease transmitter power
QRQ	Shall I send faster?	Send faster (. . . words per minute)
QRR	Are you ready for automatic operation?	I am ready for automatic operations, Send at . . . words per minute.
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).
QRT	Shall I stop sending?	Stop sending
QRU	Have you anything for me?	I have nothing for you
QRV	Are you ready?	I am ready.
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s)?	Please inform . . . that I am calling him on . . . kc/s (or Mc/s)
QRX	When will you call me again?	I will call you again at . . . (hours) on . . . kc/s (or Mc/s)
QRY	What is my turn? (<i>Relates to communication</i>)	Your turn is Number. . . (or according to any other indication). (<i>Relates to communication</i>)
QRZ	Who is calling me?	You are being called by . . . on . . . kc/s (or Mc/s)
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . 1. scarcely perceptible 2. Weak 3. fairly good 4. Good 5. very good.
QSB	Are my signals fading?	Your signals are fading.
QSC	Are you a cargo vessel?	I am a cargo vessel.
QSD	Is my keying defective?	Your keying is defective
QSE	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is . . . (figures and units).
QSF	Have you effected rescue?	I have effected rescue and am proceeding to . . . base (with . . . persons injured requiring ambulance).
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time
QSH	Are you able to home with your	I am able to home with my D/F

Abbreviation	Question	Answer or Advice
QSI	D/F equipment?	equipment (on station . . .). I have been unable to break in on your transmission. <i>or</i>

Abbreviation	Question	Answer or Advice
		Will you inform . . . (call sign) that I have been unable to break in on his transmission (on . . . kc/s (or Mc/s))
QSI	What is the charge to be collected to . . . including your internal charge?	The charge to be collected to . . . including my internal charge is . . . francs.
QSK	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram which I sent you (<i>or</i> some previous telegram)?	Repeat the last telegram which you sent me (or telegram(s) numbers(s) . . .).
QSN	Did you hear me (or . . . (call sign)) on .. kc/s (or Mc/s)?	I did hear you (or . . . (call sign)) on . . . kc/s (or Mc/s).
QSO	Can you communicate with . . . direct (or by relay)?	I can communicate with . . . direct (or by relay through . . .).
QSP	Will you relay to . . free of harge?	I will relay to . . . free of charge.
QSQ	Have you a doctor on board (or is . . . (name of person) on board)?	I have a doctor on board (or . . . (name of person) is on board)
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QSS	What working frequency will you use?	I will use the working frequency . . . kc/s (or Mc/s) (normally only the last three figures of the frequency need be given).
QSU	Shall I send or reply on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)?	Send or reply on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)
QSV	Shall I send a series of V's on this frequency (or . . . kc/s (or Mc/s))?	Send a series of V's on this frequency (or . . . kc/s (or Mc/s))
QSW	Will you send on this frequency (or on . . . kc/s (or Mc/s)) (with	I am going to send on this frequency (or on . . . kc/s (or

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Abbreviation	Question	Answer or Advice
	emissions of class . . .)?	Mc/s)) (with emissions of class . . .)
QSX	Will you listen to . . . (call sign(s)) on . . . kc/s (or Mc/s))?	I am listening to . . . (call sign(s)) on . . . kc/s (or Mc/s))
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency (or on . . . kc/s (or Mc/s)).
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).
QTA	Shall I cancel telegram number . . . ?	Cancel telegram number. . . .
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QTC	How many telegrams have you to send?	I have . . . telegrams for you (<i>or</i> for . . .).
QTD	What has the rescue vessel or rescue aircraft recovered?	. . . (identification) has recovered . . . 1. . . (number) survivors 2. Wreckage 3. . . (number) bodies.
QTE	What is my TRUE bearing from you?	Your TRUE bearing from me is . . . degrees (at . . . hours)
	<i>or</i> What is my TRUE bearing from . . . (<i>call sign</i>)?	<i>or</i> Your TRUE bearing from. . . (call sign) was . . . degrees (at . . . hours)
	<i>or</i> What is the TRUE bearing of . . . (<i>call sign</i>) from . . . (<i>call sign</i>)?	<i>or</i> The TRUE bearing of . . . (<i>call sign</i>) from . . . (<i>call sign</i>) was . . . degrees at . . . hours.
QTF	Will you give me the position of my station according to the bearings taken by the D/F stations which you control?	Your position according to the bearings taken by the D/F stations which I control was . . . latitude, . . . longitude (or other indication of position), class. . . at. . . hours.
QTG	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) (on . . . kc/s (or Mc/s))?	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) (on . . . kc/s (or Mc/s))?
	<i>or</i> Will you request . . . to send two dashes of ten seconds each followed by his call sign (repeated . . . times) (on . . . kc/s (or Mc/s))?	<i>or</i> I have requested . . . to send two dashes of ten seconds each followed by his call sign (repeated . . . times) (on . . . kc/s (or Mc/s))?
QTH	What is your position in latitude	My position is . . . latitude. . .

Abbreviation	Question	Answer or Advice
	and longitude (or according to any other indication)?	longitude (or according to any other indication).
QTI	What is your TRUE track?	My TRUE track is . . .degrees
QTJ	What is your speed? <i>(Requests the speed of a ship or aircraft through the water or air respectively.)</i>	My speed is . . . knots (or kilometres per hour or . . . statute miles per hour) <i>(Indicates the speed of a ship or aircraft through the water or air respectively.)</i>
QTK	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is . . . knots (or kilometres per hour or statute miles per hour)
QTL	What is your TRUE heading?	My TRUE heading is . . .degrees
QTM	What is your MAGNETIC heading?	My MAGNETIC heading is . . . degrees
QTN	At what time did you depart from. . . (place)?	I departed from . . . (place) at . . . (hours)
QTO	Have you left dock (or port)? <i>or</i>	I have left dock (or port) <i>or</i>
	Are you airborne?	I am airborne
QTP	Are you going to enter dock (or port) <i>or</i>	I am going to enter dock (or port) <i>or</i>
	Are you going to alight (or land)?	I am going to alight (or land)?
QTQ	Can you communicate with my station by means of the International Codes of Signals?	I am going to communicate with your station by means of the International Codes of Signals.
QTR	What is the correct time?	The correct time is . . . hours
QTS	Will you send your call sign for tuning purposes or so your frequency can be measured now (or at . . . hours) on . . . kc/s (or Mc/s)?	I will send my call sign for tuning purposes or so my frequency can be measured now (or at . . . hours) on . . . kc/s (or Mc/s).
QTT		The identification signal which follows is superimposed on another transmission.
QTU	What are the hours during which your station is open?	My station is open from . . . to . . . hours.
QTV	Shall I stand guard for you on the frequency of . . .kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . .kc/s (or Mc/s) (from . . . to . . . hours)
QTW	What is the condition of survivors?	Survivors are in . . . condition and urgently need . . .

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Abbreviation	Question	Answer or Advice
QTX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours)
QTY	Are you proceeding to the position of incident and if so when do you expect to arrive?	I am proceeding to the position of incident and expect to arrive at . . . hours (on . . . date)
QTZ	Are you continuing the search?	I am continuing the search for . . . (aircraft, ship, survival craft, survivors or wreckage).
QUA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).
QUB	Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at . . . (place of observation)?	Here is the information requested . . . <i>(The units used for speed and distances should be indicated.)</i>
QUC	What is the number (or other indication) of the last message you received from me (or from . . . (call sign))?	The number (or other indication) of the last message I received from you (or from . . . (call sign of mobile station) is . . .
QUD	Have you received the urgency signal sent by . . . (call sign of mobile station)?	I have received the urgency signal sent by . . . (call sign of mobile station) at . . . hours
QUE	Can you use telephony in . . . (language), with interpreter if necessary; if so, on what frequencies?	I can use telephony in . . . (language) on . . . kc/s (or Mc/s).
QUF	Have you received the distress signal sent by . . . (call sign of mobile station)?	I have received the distress signal sent by . . . (call sign of mobile station) at . . . hours
QUG	Will you be forced to alight or land?	I am forced to alight (or land) immediately. <i>or</i> I shall be forced to alight or (land) at . . . (position or place) at . . . hours.
QUH	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is . . . (units).
QUI	Are your navigation lights working?	My navigation lights are working.
QUJ	Will you indicate the TRUE track to reach you (or . . .)?	The TRUE track to reach me (or . . .) is . . . degrees at . . . hours.
QUK	Can you tell me the condition of the sea observed at . . . (place or coordinates)?	The sea at . . . (place or coordinates) is . . .

Abbreviation	Question	Answer or Advice
QUL	Can you tell me the swell observed at . . . (place or coordinates)?	The swell at . . . (place or coordinates) is . . .
QUM	May I resume normal working?	Normal working may be resumed.
QUN	Will vessels in my immediate vicinity . . . <i>or</i> (in the vicinity of . . . latitude . . . longitude) <i>or</i> (in the vicinity of . . .) please indicate their position, TRUE course and speed?	My position, TRUE course and speed are . . .
QUO	Shall I search for . . . 1. aircraft 2. Ship 3. Survival aircraft in the vicinity of . . . latitude . . . longitude (<i>or according to any other indication</i>)	Please search for . . . 1. aircraft 2. Ship 3. Survival aircraft in the vicinity of . . . latitude . . . longitude (<i>or according to any other indication</i>)
QUP	Will you indicate your position by . . . 1. Searchlight 2. Black smoke trail 3. Pyrotechnic lights?	My position is indicated by 1. Searchlight 2. Black smoke trail 3. Pyrotechnic lights.
QUQ	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your searchlight on a cloud, occulting if possible and, if my aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.
QUR	184. Have survivors . . . 1. Received survival equipment 2. Been picked up by rescue vessel 3. Been reached by ground rescue party?	Survivors . . . 1. Are in possession of survival equipment dropped by . . . 2. Have been picked up by rescue vessel 3. Have been reached by ground rescue party.
QUS	Have you sighted survivors or wreckage? If so, in what position?	Have sighted. . . 1. Survivors in water 2. Survivors on rafts 3. Wreckage in position . . . latitude . . . longitude (<i>or according to any other indication</i>).
QUT	Is position of incident marked?	Position of incident is marked by . . .

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Abbreviation	Question	Answer or Advice
QUU	Shall I home ship or aircraft to my position?	<ol style="list-style-type: none"> 1. flame or smoke float 2. sea marker 3. Sea marker dye 4. ... (specify other marking) <p>Home ship or aircraft . . . (call sign) . . .</p> <ol style="list-style-type: none"> 1. to your position by transmitting your call sign and long dashes on . . . kc/s (or Mc/s) 2. by transmission on . . . kc/s (or Mc/s) TRUE track to reach you.
QUW	Are you in the search area designated as . . . (designator or latitude and longitude)?	I am in the . . . (designation) search area.
QUY	Is position of survival craft marked ?	<p>Position of survival craft was marked at . . . hours by . . .</p> <ol style="list-style-type: none"> 1. flame or smoke float 2. sea marker 3. sea marker dye 4. . . . (specify other marking).
QUZ to QVZ	(Not allocated)	

B . LIST OF SIGNALS ACCORDING TO THE NATURE OF QUESTIONS,
ANSWERS OR ADVICE

Abbreviation	Question	Answer or Advice
	Name	
QRA	What is the name of your vessel (<i>or</i> station)?	The name of my vessel (<i>or</i> station) is . . .
	Route	
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .
	Position	
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles (or kilometres)
QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is . . . latitude. . .longitude (or according to any other indication).
QTN	At what time did you depart from. . (place)?	I departed from . . .(place) at . . . (hours)
	Quality of Signals	
QRI	How is the tone of my transmission?	The tone of your transmission is . . . 1. Good 2. Variable 3. bad.
QRK	What is the intelligibility of my signals (or those of . . .)	The intelligibility of yoursignals (or those of . . .) is . . . 1. Bad 2. Poor 3. Fair 4. Good 5. excellent.
	Strength of Signals	
QRO	Shall I increase transmitter power?	Increase transmitter power
QRP	Shall I decrease transmitter power?	Decrease transmitter power
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . 1. scarcely perceptible 2. weak 3. fairly good 4. good 5. very good.
QSB	Are my signals fading?	Your signals are fading.
	Keying	
QRQ	Shall I send faster?	Send faster (. . words per minute)
QRR	Are you ready for automatic operation?	I am ready for automatic operations, Send at . . words per minute.

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Abbre- viation	Question	Answer or Advice
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).
QSD	Is my keying defective?	Your keying is defective
Interference		
QRM	Are you being interfered with?	I am being interfered with (1. nil 2. slightly 3. moderately 4. severely 5. extremely).
QRN	Are you troubled by static?	I am troubled by static . . . (1. nil 2. Slightly 3. Moderately 4. Severely 5. extremely).
Adjustment of Frequency		
QRG	Will you tell me my exact frequency (or that of . . .)?	Your exact frequency (or that of . . .) is . . . kc/s (or Mc/s).
QRH	Does my frequency vary?	Your frequency varies.
QTS	Will you send your call sign for tuning purposes or so your frequency can be measured now (or at . . . hours) on . . . kc/s (or Mc/s)?	I will send my call sign for tuning purposes or so my frequency can be measured now (or at . . . hours) on . . . kc/s (or Mc/s).
Choice of Frequency and/or Class of Emission		
QSN	Did you hear me (or . . . (call sign)) on . . . kc/s (or Mc/s)?	I did hear you (or . . . (call sign)) on . . . kc/s (or Mc/s).
QSS	What working frequency will you use?	I will use the working frequency . . . kc/s (normally only the last three figures of the frequency need be given).
QSU	Shall I send or reply on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)?	Send or reply on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)
QSV	Shall I send a series of V's on this frequency (or . . . kc/s (or c/s))?	Send a series of V's on this frequency (or . . . kc/s (or Mc/s))
QSW	Will you send on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)?	I am going to send on this frequency (or on . . . kc/s (or Mc/s)) (with emissions of class . . .)
QSX	Will you listen to . . . (call sign(s)) on . . . kc/s (or Mc/s)?	I am listening to . . . (call sign(s)) on . . . kc/s (or Mc/s)

Abbreviation	Question	Answer or Advice
	Choice of Frequency	
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency (<i>or on . . . kc/s (or Mc/s)</i>).
	Establishing Communication	
QRL	Are you busy?	I am busy (or I am busy with ...). Please do not interfere.
QRV	Are you ready?	I am ready.
QRX	When will you call me again?	I will call you again at . . . (hours) on . . . kc/s (or Mc/s)
QRY	What is my turn? (<i>Relates to communication</i>)	Your turn is Number. . . (or according to any other indication). (<i>Relates to communication</i>)
QRZ	Who is calling me?	You are being called by . . . on . . . kc/s (or Mc/s)
QSC	Are you a cargo vessel?	I am a cargo vessel
	Establishing Communication	
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QTQ	Can you communicate with my station by means of the International Codes of Signals?	I am going to communicate with your station by means of the International Codes of Signals
QUE	Can you use telephony in . . . (language), with interpreter if necessary; if so, on what frequencies?	I can use telephony in . . . (language) on . . . kc/s (or Mc/s).
	Time	
QTR	What is the correct time?	The correct time is . . . hours
QTU	What are the hours during which your station is open?	My station is open from . . . to . . . hours.
	Charges	
QRC	By what private enterprise (<i>or State Administration</i>) are the accounts for charges for your station settled?	The accounts for charges of my station are settled by the private enterprise . . . (<i>or State Administration</i>)
QSJ	What is the charge to be collected to . . . including your internal charge?	The charge to be collected to . . . including my internal charge is . . . francs.
	Transit	
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s)?	Please inform . . . that I am calling him on . . . kc/s (or Mc/s)
QSO	Can you communicate with . . . direct (<i>or by relay</i>)?	I can communicate with . . . direct (or by relay through . . .).

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Abbreviation	Question	Answer or Advice
QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.
QSQ	Have you a doctor on board (or is . . . (name of person) on board)?	I have a doctor on board (or . . . (name of person) is on board)
QUA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).
QUC	What is the number (or other indication) of the last message you received from me (or from . . . (call sign))?	The number (or other indication) of the last message I received from you (or from . . . (call sign) is . . .
Exchange of Correspondence		
QRJ	How many radiotelephone calls have you to book?	I have . . . radiotelephone calls to book.
QRU	Have you anything for me?	I have nothing for you
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time
QSI		I have been unable to break in on your transmission. or Will you inform . . . (call sign) that I have been unable to break in on his transmission on . . . kc/s (or Mc/s)
QSK	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram which I sent you (or some previous telegram)?	Repeat the last telegram which you sent me (or telegram(s) numbers(s) . . .).
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).
QTA	Shall I cancel telegram number . . . ?	Cancel telegram number. . . .
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QTC	How many telegrams have you to send?	I have . . . telegrams for you (or for . . .).
QTV	Shall I stand guard for you on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)
QTX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours)

Abbreviation	Question	Answer or Advice
	Movement	
QRE	What is your estimated time of arrival at (or over . . .) . . . (place)?	My estimated time of arrival at ... (or over . . .) (place) is . . . hours.
QRF	Are you returning to . . . (place)?	I am returning to . . . (place) <i>or</i> Return to . . . (place)
QSH	Are you able to home with your D/F equipment?	I am able to home with my D/Equipment (on . . . (<i>call sign</i>)).
QTI	What is your TRUE course?	My TRUE course is . . . degrees
Q TJ	What is your speed? (<i>Requests the speed of a ship or aircraft through the water or air respectively.</i>)	My speed is . . . knots (<i>or kilometres per hour or statute miles per hour</i>) (<i>Indicates the speed of a ship or aircraft through the water or air respectively.</i>)
QTK	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is . . . knots (<i>or kilometres per hour or statute miles per hour</i>)
QTL	What is your TRUE heading?	My TRUE heading is . . . degrees
QTM	What is your MAGNETIC heading?	My MAGNETIC heading is ... degrees
QTN	At what time did you depart from . . . (place)?	I departed from . . . (place) at . . . (hours)
QTO	Have you left dock (<i>or port</i>)? <i>or</i> Are you airborne?	I have left dock (<i>or port</i>)? <i>or</i> I am airborne?
QTP	Are you going to enter dock (<i>or port</i>) <i>or</i> Are you going to alight (<i>or land</i>)?	I am going to enter dock (<i>or port</i>) <i>or</i> I am going to alight (<i>or land</i>)?
QUG	Will you be forced to alight or land?	I am forced to alight (<i>or land</i>) immediately. <i>or</i> I shall be forced to alight or (<i>land</i>) at . . . (position or place) at . . . hours.
QUJ	Will you indicate the TRUE track to reach you (or . . .)?	The TRUE track to reach me (or . . .) is . . . degrees at . . . hours.
QUN	Will vessels in my immediate vicinity . . . <i>or</i> (in the vicinity of . . . latitude . . . longitude) <i>or</i>	My position, TRUE course and speed are . . .

Abbre- viation	Question	Answer or Advice
	(in the vicinity of . . .) please indicate their position, TRUE course and speed? Meteorology	
QUB	Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at . . . (place of observation)?	Here is the information requested. . . (<i>The units used for speed and distances should be indicated.</i>)
QUH	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is . . . (units).
QUK	Can you tell me the condition of the sea observed at . . . (place or coordinates)?	The sea at . . . (place or co-ordinates) is . . .
QUL	Can you tell me the swell observed at . . . (place or coordinates)?	The swell at . . . (place or co-ordinates) is . . .
	Radio Direction-Finding	
QTE	What is my TRUE bearing from you? <i>or</i>	Your true bearing from me is . . . degrees (at . . . hours) <i>or</i>
	What is my TRUE bearing from . . . (call sign)? <i>or</i>	Your true bearing from. . . (call sign) was . . . degrees (at. . . hours) <i>or</i>
	What is the TRUE bearing of . . . (call sign) from . . . (call sign)?	The true bearing of . . . (call sign) from . . . (call sign) was . . . degrees at . . . hours.
QTF	Will you give me the position of my station according to the bearings taken by the direction-finding stations which you control?	Your position according to the bearings taken by the direction-finding stations which I control was . . . latitude, . . . longitude (<i>or other indication of position</i>), class. . . at. . . hours.
QTG	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) (on . . . kc/s (or Mc/s))? <i>or</i>	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) (on . . . kc/s (or Mc/s))? <i>or</i>
	Will you request . . . to send two dashes of ten seconds each followed by his call sign (repeated . . . times) (on . . . kc/ (or Mc/s))?	I have requested . . . to send two dashes of ten seconds each followed by his call sign (repeated . . . times) (on . . . kc/s (or Mc/s))?
	Suspension of Work	
QRT	Shall I stop sending?	Stop sending
QUM	May I resume normal working?	Normal working may be resumed.

Abbreviation	Question	Answer or Advice
	Urgency	
QUD	Have you received the urgency signal sent by . . . (<i>call sign</i>)?	I have received the urgency signal sent by . . . (<i>call sign</i>) at . . . hours
QUG	Will you be forced to alight or land?	I am forced to alight (or land) immediately. <i>or</i> I shall be forced to alight or (land) at . . . (position or place) at . . . hours.
	Distress	
QUF	Have you received the distress signal sent by . . . (<i>call sign</i>)?	I have received the distress signal sent by . . . (<i>call sign</i>) at . . . hours
QUM	May I resume normal working?	Normal working may be resumed.
	Search and Rescue	
QSE	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is . . . (<i>figures and units</i>).
QSF	Have you effected rescue?	I have effected rescue and am proceeding to . . . base (with . . . persons injured requiring ambulance).
QTD	What has the rescue vessel or rescue aircraft recovered?	. . . (identification) has recovered 1. . . . (number) survivors 2. wreckage 3. . . . (number) bodies.
QTW	What is the condition of survivors?	Survivors are in . . . condition and urgently need . . .
QTY	Are you proceeding to the position of incident and if so when do you expect to arrive?	I am proceeding to the position of incident and expect to arrive at . . . hours (on . . . (<i>date</i>)).
QTZ	Are you continuing the search?	I am continuing the search for . . . (aircraft, ship, survival craft, survivors or wreckage).
QUI	Are your navigation lights working?	My navigation lights are working.
QUN	Will vessels in my immediate vicinity . . . <i>or</i> (in the vicinity of . . . latitude . . . longitude) <i>or</i> (in the vicinity of . . .) please indicate their position, TRUE course and speed?	My position, TRUE course and speed are . . .

App. 2]

Abbreviation	Question	Answer or Advice
QUO	Shall I search for . . . 1. aircraft 2. Ship 3. Survival aircraft in the vicinity of . . . latitude . . . longitude (or according to any other indication)	Please search for . . . 1. aircraft 2. Ship 3. Survival aircraft in the vicinity of . . . latitude . . . longitude (or according to any other indication)
QUP	Will you indicate your position by . . . 1. Searchlight 2. Black smoke trail 3. Pyrotechnic lights?	My position is indicated by 1. Searchlight 2. Black smoke trail 3. Pyrotechnic lights.
QUQ	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your searchlight on a cloud, occulting if possible and, if my aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.
QUR	185. Have survivors . . . 1. Received survival equipment 2. Been picked up by rescue vessel 3. Been reached by ground rescue party?	Survivors . . . 1. Are in possession of survival equipment dropped by . . . 2. Have been picked up by rescue vessel 3. Have been reached by ground rescue party.
QUS	Have you sighted survivors or wreckage? If so, in what position?	Have sighted. . . 1. Survivors in water 2. Survivors on rafts 3. Wreckage in position . . . latitude . . . longitude (or according to any other indication).
QUT	Is position of incident marked?	Position of incident is marked by . . . 1. flame or smoke float 2. sea marker 3. Sea marker dye 4. ... (specify other marking)
QUU	Shall I home ship or aircraft to my position?	Home ship or aircraft . . . (call sign) . . . 1. to your position by transmitting your call sign and long dashes on . . . kc/s (or Mc/s) 2. by transmission on . . . kc/s (or Mc/s) TRUE track to reach you.
QUW	Are you in the search area designated as . . . (designator or	I am in the . . . (designation) search area.

Abbreviation	Question	Answer or Advice
QUY	<p><i>latitude and longitude</i>)?</p> <p>Is position of survival craft marked?</p>	<p>Position of survival craft was marked at . . . hours by . . .</p> <ol style="list-style-type: none"> 1. flame or smoke float 2. sea marker 3. sea marker dye 4. . . . (<i>specify other marking</i>).
QTT	<p>Identification</p>	<p>The identification signal which follows is superimposed on another transmission.</p>

PART 2.—MISCELLANEOUS ABBREVIATIONS AND SIGNALS

Abbreviation or Signal	Definition
AA	All after . . . (<i>used after a question mark to request a repetition</i>).
AB	All before . . . (<i>used after a question mark to request a repetition</i>).
ADS	Address (<i>used after a question mark to request a repetition</i>).
<u>AR</u>	End of transmission. .(•—••• <i>to be sent as one signal</i>)
<u>AS</u>	Waiting period.(•—••• <i>to be sent as one signal</i>)
BK	Signal used to interrupt a transmission in progress.
BN	All between . . . and . . . (<i>used after a question mark to request a repetition</i>).
BQ	A reply to an RQ.
CFM	Confirm (<i>or I confirm</i>).
CL	I am closing my station.
COL	Collate (<i>or I collate</i>).
CP	General call to two or more specified stations (<i>see Section 89</i>).
CQ	General call to all stations. (<i>see Section 89</i>).
CS	Call sign (<i>used to request a call sign</i>).
<u>DDD</u>	Used to identify the transmission of the distress message by a station not itself in distress (<i>see Section 122</i>).
DE	From (<i>used to precede the call sign of the calling station</i>).
DF	Your bearing at . . . hours was . . . degrees, in the doubtful sector of this station, with a possible error of . . . degrees.
DO	Bearing doubtful. Ask for another bearing later (<i>or at . . . hours</i>).
E	East (<i>Cardinal</i>).
ER	Here . . .
ETA	Estimated time of arrival.
ITP	The punctuation counts
K	Invitation to transmit.

Abbreviation or Signal	Definition
KMH	Kilometres per hour.
KTS	Nautical miles per hour (<i>Knots</i>).
MIN	Minute (<i>or</i> Minutes).
MPH	Miles per hour.
MSG	Prefix indicating a message to or from the master of a ship concerning its operation or navigation.
N	North (<i>Cardinal</i>).
NIL	I have nothing to send to you.
NO	No (<i>negative</i>).
NW	Now.
OK	We agree (<i>or</i> It is correct).
OL	Ocean Letter.
P	Prefix indicating a private radiotelegram.
PBL	Preamble (<i>used after a question mark, to request a repetition</i>).
R	Received.
REF	Reference to . . . (<i>or</i> Refer to . . .).
RPT	Repeat (<i>or</i> I repeat) (<i>or</i> Repeat . . .).
RQ	Indication of a request.
S	South (<i>Cardinal</i>).
SIG	Signature (<i>used after a question mark to request a repetition</i>).
SLT	Radiomaritime Letter
SOS	Distress Signal .(····—···· <i>to be sent as one signal</i>)
SS	Indicator preceding the name of a ship
SVC	Prefix indicating a service telegram.
SYS	Refer to your service telegram.
TFC	Traffic
TR	Used by a land station to request the position and next port of call of a mobile station (see Sections 95 and 1148); used also as a prefix to the reply.
TTT	This group when sent three times constitutes the safety signal (see Section 125).

Abbreviation or Signal	Definition
TU	Thank you.
<u>TXT</u>	Text (<i>used after a question mark to request a repetition</i>).
VA	End of work.
W	West (<i>Cardinal</i>).
WA	Word after . . . (<i>used after a question mark to request a repetition</i>).
WB	Word before . . . (<i>used after a question mark to request a repetition</i>).
WD	Word(s) or Group(s).
XQ	Prefix used to indicate the transmission of a service note.
XXX	.This group when sent three times constitutes the urgency signal (see Section 124).
YES	Yes (Affirmative).

APPENDIX 3

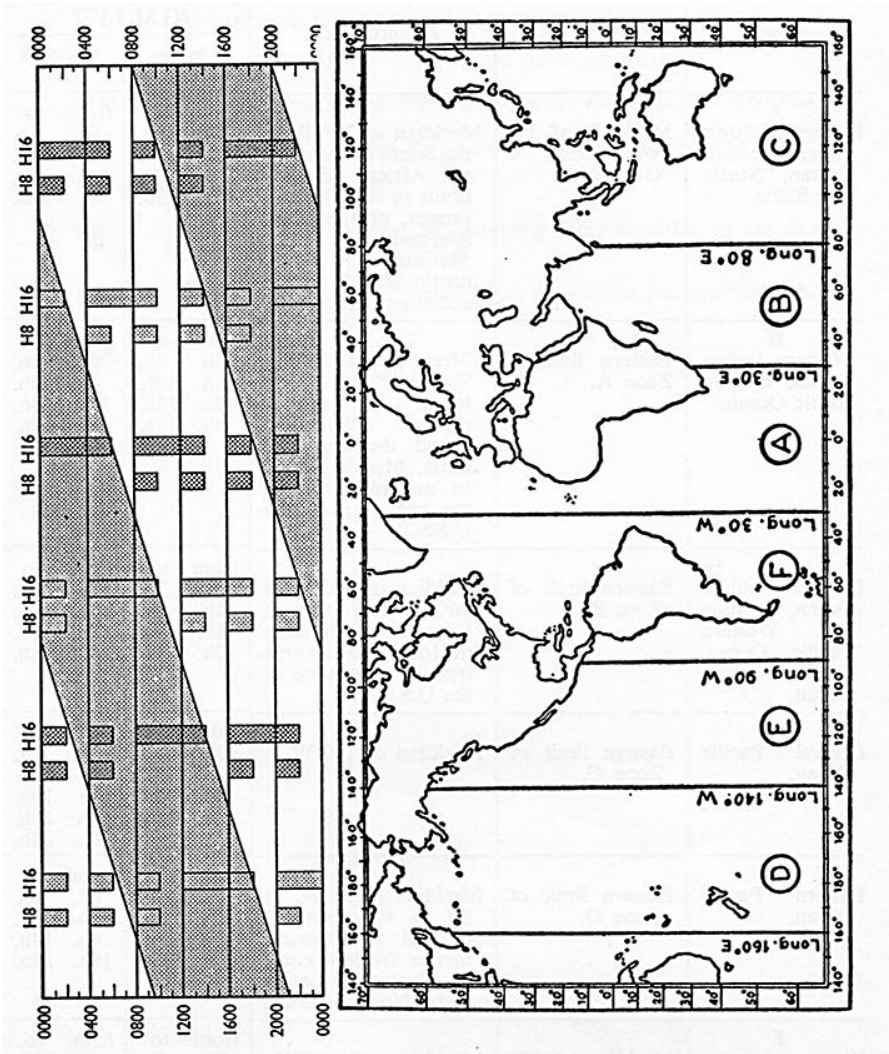
Hours of Service for Ships in the Second Category

PART 1—TABLE

Zones	Western limits	Eastern limits	Hours of Service (Greenwich Mean Time) (G.M.T.)	
			8 hours (H8)	16 hours (H16)
A Eastern Atlantic Ocean, Mediterranean, North Sea, Baltic.	Meridian of 30° W, Coast of Greenland.	Meridian of 30° E, to the South of the coast of Africa, Eastern limits of the Mediterranean, of the Black Sea, and of the Baltic, Meridian of 30° E northwards from the coastline of Norway.	from 8h. 12h. 16h. 20h. to 10h. 14h. 18h. 22h.	from 0h. 8h. 16h. 20h. to 6h. 14h. 18h. 22h.
B Western Indian Ocean, Eastern Arctic Ocean.	Eastern limit of Zone A.	Meridian of 80° E, Western Coast of Ceylon to Adam's Bridge, thence Westward round the coast of India, Meridian 80°E to northwards from the coastline of the U.S.S.R.	from 4h. 8h. 12h. 16h. to 6h. 10h. 14h. 18h.	from 0h. 4h. 12h. 16h. 20h. to 2h. 10h. 14h. 18h. 24h.
C Eastern Indian Ocean, China Sea, Western Pacific Ocean, Eastern Arctic Ocean.	Eastern limit of Zone B.	Meridian of 160°E, as far as the coast of Kamchatka, Meridian of 160°E northwards from the coastline of the U.S.S.R.	from 0h. 4h. 8h. 12h. to 2h. 6h. 10h. 14h.	from 0h. 8h. 12h. 16h. to 6h. 10h. 14h. 22h.
D Central Pacific Ocean.	Eastern limit of Zone C.	Meridian of 140°W.	from 0h. 4h. 8h. 20h. to 2h. 6h. 10h. 22h.	from 0h. 4h. 8h. 12h. 20h. to 2h. 6h. 10h. 18h. 24h.
E Eastern Pacific Ocean.	Eastern limit of Zone D.	Meridian of 90°W, as far as the coast of Central America, thence Western coast of Central America and of North America.	from 0h. 4h. 16h. 20h. to 2h. 6h. 18h. 22h.	from 0h. 4h. 8h. 16h. to 2h. 6h. 14h. 22h.
F Western Atlantic Ocean and Gulf of Mexico.	Meridian of 90° W, Gulf of Mexico, Eastern coast of North America.	Meridian of 30°W, Coast of Greenland.	from 0h. 12h. 16h. 20h. to 2h. 14h. 18h. 22h.	from 0h. 4h. 12h. 20h. to 2h. 10h. 18h. 22h.

PART 2—DIAGRAM

Greenwich Mean Time (G.M.T.)



Greenwich Mean Time (G.M.T.)

APPENDIX 4

Examinations for the Certificates of Competence in Radiotelegraphy and Radiotelephony Issued by the Postmaster General

1. General Regulations

(1) There are three certificates—**Special, Second Class** and **First Class**—in radiotelegraphy, and two certificates—**Restricted** and **General**—in radiotelephony.

(2) All communications about examinations should be addressed to the Inspector of Wireless Telegraphy, General Post Office, Union House, St. Martin's-le-Grand, London, E.C.1.

(3) Examinations are conducted at:

(a) schools where apparatus and examination facilities have been approved by the Postmaster General as suitable for the purpose, and

(b) the address given in paragraph (2).

Examinations for radiotelephony certificates are also conducted on board suitably equipped ships.

Sea-going radio operators who, between voyages, wish to obtain higher qualifications, may be examined at the address given in paragraph (2).

(4) Application forms are obtainable from the Principals of the schools, the Inspector of Wireless Telegraphy, or Ship Radio Inspection Offices at the major seaports.

(5) Lists of schools at which examinations are held and the addresses of the Ship Radio Inspection Offices can be obtained from the address given in paragraph (2).

(6) Particulars of the fees payable for any examination or part of an examination are obtainable from the Principals of schools, the Inspector of Wireless Telegraphy or from one of the Ship Radio Inspection Offices.

Where an examination is in two parts, separate fees are required for each part.

Fees should be paid by crossed cheque, postal order or money order made payable to H.M. Postmaster General.

2.

Radiotelegraphy Certificates

Special Certificate

(1) The Special Certificate states that the holder has been examined in radiotelegraphy and has passed in:

- (a) Knowledge of the adjustment and practical working of radiotelegraph and radiotelephone apparatus.
- (b) Sending by hand and receiving by ear, in the Morse code, messages in plain language at a speed of not less than twenty words a minute, and in code groups at a speed of not less than sixteen groups a minute.
- (c) Practical knowledge of radiotelephone operation and procedure.
- (d) Sending and receiving spoken messages correctly by telephone.
- (e) General knowledge of the regulations applying to the exchange of radiocommunications and particularly of that part of those regulations relating to the safety of life.

EXAMINATION FOR THE SPECIAL CERTIFICATE

(2) The examination for the Special Certificate consists of tests in:

- (a) Morse manipulation,
- (b) knowledge of the regulations, and
- (c) knowledge of marine radio equipment of a type currently in use on ships for which a radiotelegraph installation is not made compulsory by international agreement.

(3) Candidates are required:

- (a) to know the functions of the apparatus comprising a marine radio installation (but excluding automatic alarm apparatus),
 - to know the usual precautions taken in handling such apparatus,
 - to demonstrate ability in the use of tools, measuring instruments and spare parts, and
 - to demonstrate ability in the taking of direction-finding bearings.

The tests, which are oral and practical, include the tracing and remedying of simple faults and the operation, adjustment and maintenance of the apparatus. Questions on direction-finding equipment are confined to operating and calibration procedures.

- (b) To demonstrate ability to send and receive in the Morse code.

The Morse sending test is carried out on an ordinary Morse key. The accuracy of signalling, the correct formation of characters and the correctness of spacing is taken into account. The wearing of headphones is not permitted during the sending test.

Double headgear telephone receivers are used in the receiving tests. The legibility of the transcription is taken into account.

- (c) Candidates are required to send and receive plain language at twenty words a minute for three minutes, code groups at sixteen groups a minute for three minutes and figures at ten groups a minute for one and a half minutes. Four errors are allowed in each of the plain language and code group tests and two errors are allowed in each figure group test but no uncorrected errors are permitted in the sending tests. Five letters or characters are counted as one word or group.
- (d) To demonstrate ability in the sending and receiving of radiotelegrams by means of telephone apparatus and in the use of the procedure applicable to radiotelephony. The time allowed for this test is ten minutes.
- (e) To have a knowledge of the regulations governing the exchange of radiocommunications, of the documents relative to the charges for radiocommunications, and of that part of the Convention for the Safety of Life at Sea which relates to radiocommunications.

The regulations test consists of a written paper for which thirty minutes will be allowed to answer eight questions covering the procedures described in this Handbook. A question may also be included about the long-distance ship-shore radiocommunication service. A specimen paper is given in Section 3 of this Appendix.

- (f) To take a practical test in the acceptance, preparation, transmission and reception of two radiotelegrams and in keeping a radiotelegraph log. The time allowed for this test is thirty minutes.
- (g) To prepare a typical distress message. The time allowed is five minutes.
- (h) To have a general knowledge of the geography of the world. This test is in the form of oral questions.

CONDITIONS OF THE EXAMINATION

(4) Candidates who fail must wait at least six weeks before re-examination. A separate fee is payable for each examination.

Second Class Certificate

(5) The Second Class Certificate states that the holder has been examined in radiotelegraphy and has passed in:

- (a) Elementary theoretical and practical knowledge of electricity and radio.
- (b) The adjustment, maintenance and practical working of radiotelegraph, radiotelephone and radio direction-finding apparatus including accessory apparatus used in the ship service.
- (c) The taking of radio direction-finding bearings.
- (d) Sending by hand and receiving by ear, in the Morse code, messages in plain language at a speed of not less than twenty words a minute, and in code groups at a speed of not less than sixteen groups a minute.
- (e) Sending and receiving spoken messages correctly by telephone.
- (f) Knowledge of the regulations applying to the exchange of radiocommunications, of the documents relative to the charges for radiocommunications, and of that part of the Convention for the Safety of Life at Sea which relates to radiocommunications.
- (g) Knowledge of the principal maritime navigation routes and of the more important telecommunication routes of the world.

EXAMINATION FOR THE SECOND CLASS CERTIFICATE

(6) The examination is in two parts,

(a) Part 1. Theoretical.

Paper 1—Technical Electricity.

Paper 2—Radiocommunication.

Each paper consists of eight questions. Not more than six questions in each paper are to be answered. The time allowed for each paper is three hours.

The questions in Paper 1 are based on the syllabus detailed in paragraph (12) (a) and those in Paper 2 on that detailed in paragraph (12) (b). Specimen papers are given in Section 3 of this Appendix.

(b) Part 2. Practical, Manipulative and Regulations.

The knowledge required and the form of examination are as shown in paragraph (3) and, in addition, candidates are required:

- (i) To have a more detailed practical knowledge of the operation, adjustment and maintenance of equipment including the automatic alarm and direction-finding apparatus.
- (ii) To answer oral questions on the practical aspects of any part of the syllabus detailed in paragraph (12).
- (iii) To send, and receive, by Morse code, eight groups of accented letters in one minute. Two errors are allowed in each test but there must be no uncorrected errors in the sending test. The conditions given in paragraph (3) (b) apply to these tests.
- (iv) To have a general knowledge of the principal navigation routes and the more important telecommunication routes.

CONDITIONS OF EXAMINATION

(7) Candidates must qualify in Part 1 of the examination before Part 2 may be taken.

Part 2 of the examination may be attempted up to a maximum of three attempts, at intervals of not less than three months, within twelve months from the date on which Part 1 was taken. If success is not gained in this twelve month period the full examination must be re-taken.

First Class Certificate

(8) The First Class Certificate states that the holder has been examined in radiotelegraphy and has passed in:

- (a) The general principles of electricity and the theory of radio.
- (b) The adjustment, maintenance and practical working of radiotelegraph, radiotelephone and radio direction-finding apparatus including accessory apparatus used in the ship service.

- (c) The taking of radio direction-finding bearings.
- (d) Sending by hand and receiving by ear, in the Morse code, messages in plain language at a speed of not less than twentyfive words a minute, and in code groups at a speed of not less than twenty groups a minute.
- (e) Sending and. receiving spoken messages correctly by telephone.
- (f) Detailed knowledge of the regulations applying to the exchange of radiocommunications, of the documents relative to the charges for radiocommunications, and of that part of the Convention for the Safety of Life at Sea which relates to radiocommunications.
- (g) Knowledge of the principal maritime navigation routes and of the more important telecommunication routes of the world.

EXAMINATION FOR THE FIRST CLASS CERTIFICATE

- (9) The examination is in two parts.

- (a) Part 1. Theoretical

Paper 1—Technical Electricity.

Paper 2—Radiocommunication.

Each paper consists of eight questions. Not more than six questions in each paper are to be answered. The time allowed for each paper is three hours.

The questions in Paper 1 are based on the syllabus detailed in paragraph (12) (a). Most of the questions in Paper 2 are drawn from the syllabus detailed in paragraph (12) (b) but at least one question is drawn from the syllabus of paragraph (12) (a).

Specimen papers are given in Section 3 of this Appendix.

Candidates are expected to show a more detailed knowledge than that required for the Second Class Certificate.

- (b) Part 2. Practical, Manipulative and Regulations.

Candidates are examined as described for the Second Class Certificate but are expected to have a more detailed knowledge and superior manipulative skill. The speeds of Morse operation in plain language, code groups and figure groups are increased to twentyfive words a minute, twenty groups a minute and twelve groups a minute, respectively.

CONDITIONS OF THE EXAMINATION

(10) Candidates must qualify in Part 1 before Part 2 may be taken.

Candidates who already hold the Second Class Certificate are not required to take Paper L

Part 2 of the examination may be attempted up to a maximum of three attempts at intervals of not less than three months, within twelve months from the date on which Part 1 was taken. If success is not gained in this twelve month period the full examination must be re-taken.

Re-tests

(11) Where re-tests are necessary under the provisions of the Merchant Shipping (Radio) Rules, 1952, the nature and extent of the tests are determined by the length of time that the applicant has been away from sea service as a radio operator and, in normal circumstances, the procedure is as follows:

- (a) Where the absence from sea is from two to six years the applicant is tested in Morse and is required to demonstrate his continued ability to operate marine radio equipment. He is examined orally on the regulations and procedures contained in this Handbook.
- (b) Where the absence exceeds six years the applicant is required to take, in addition, practical tests in the exchange of messages, in log-keeping, in the maintenance of modern marine radio equipment and in direction-finding.

Syllabus for Part I of the First and Second Class Examinations

(12) (a) TECHNICAL ELECTRICITY

Construction of Matter. Elementary concept of atomic structure. Movement of electrons. Properties of insulating, conducting and semi-conducting materials.

Magnetism. Nature of magnetism. Laws. Properties of magnetic materials. Permanent magnets.

Electricity. Electric charge. Electric field. Potential. Capacitance. Ohm's Law. Practical units. Heating effect of electric current. Units of heat, power and

energy. Resistors in series and parallel. Fuses. Practical primary and secondary cells; their construction, action, maintenance and use. Practical charging circuits. Simple calculations.

Electromagnetism. Magnetic effect of an electric current. Magnetic hysteresis. Conductors in magnetic fields. Fleming's Rules and Lenz's Law. Generator and motor principles. Self-inductance and mutual inductance. Energy stored in current-carrying inductors. Unit of inductance, simple calculations.

Electrostatics. Capacitance and capacitors. Energy stored in a charged capacitor. Capacitors in series and parallel. Unit of capacitance. CR time constants; growth and decay of current in CR combinations. Simple calculations.

Inductors and Capacitors. Construction of practical types used in radiocommunication. Electrostatic and electromagnetic shielding and screening.

Alternating Current. Generation. The sine curve. Peak and R.M.S. values. Power and power factor. Phase relationships. Capacitive and inductive reactance. Impedance. Resonance. Q value. Coupling and coupling factor. Vector representation. Simple calculations.

Measuring Instruments. Construction, principles of operation and use of moving coil and moving iron meters. Thermocouples and instrument rectifiers. Use of shunts and multipliers; calculation of values. Continuity and insulation tests.

Machines. Construction, action and maintenance of motors, generators and rotary transformers. Efficiency and power. Control devices.

Transformers. General principles. Construction and action. Losses. Efficiency. Regulation of R, L and C loads. Vector representation.

Valves. Principles, action and construction of valves including gas-filled types, cathode-ray tubes, metal rectifiers and crystal diodes. Basic construction and simple action of transistors.

(b) RADIOCOMMUNICATION

Power Supplies. Single-phase rectifier systems. Use of thermionic diodes, metal rectifiers and transistors. D.C

to A. C. converters. Vibrators. Smoothing. Constructional details of components in rectifier and converter systems.

Uses of Valves. As detectors, amplifiers and oscillators. Class A, B and C amplification. Operation in push-pull and parallel. Automatic and direct bias. Decoupling arrangements. Miller effect. Simple transistor amplifiers and oscillators. Crystal diode detectors.

Audio Frequency Amplifiers. Interstage coupling. Stage gain. Power amplification.

Radio Frequency Amplifiers. Interstage coupling. Stage gain. Methods of varying passband. Reaction. Prevention of instability. Descriptive treatment of high and low pass filters.

Oscillators. Simple circuits. Descriptive treatment of action. Piezo-electric effect. Crystal controlled oscillators. Multivibrators and flip-flops.

Electromagnetic Waves. Frequency, wavelength and velocity. Radiation from an aerial. Descriptive treatment of the propagation of low, medium, high and very high frequency waves. Choice of frequencies. Fading.

Transmitters. General treatment, stage by stage. Frequency multiplying. Keying systems. Modulation including frequency modulation. Microphones. Aerial coupling. Spurious emissions and methods of suppression. Overload and safety devices.

Portable Lifeboat Equipment. Transmitter and receiver circuits. Power supplies.

Receivers. General treatment, stage by stage. Frequency changing. Demodulators. Discriminators. Loudspeakers, telephone receivers and output matching. Interference and methods of eliminating. Noise and noise limiters. Automatic gain control. Variable selectivity.

Automatic Alarms. Receivers. Selector circuits and mechanisms. Alarm circuits. Methods of testing.

Automatic Keying Devices. Facilities and principles of operation.

Direction Finders. Properties of simple loop, swinging loop and Bellini-Tosi loops. Causes of error and methods of correcting. Sense determination. Calibration. Simple concept of Adcock system.

Aerials. Practical forms of shipborne MF, HF and VHF aerials. Radiation resistance. Effects of surroundings. Rigging of aerials and protective devices. Tuning and matching.

Wavemeters. Principles and uses.

**Examination for the Postmaster General's First and Second Class
Certificates of Competence in Radiotelegraphy**

Technical Electricity

Three hours are allowed for this paper. Questions marked with an asterisk must be attempted. Six questions should be answered in all.

- 1.* A ship's emergency battery of 12 lead-acid cells is to be charged from a 100 volts D.C. supply.

Draw a diagram of a circuit suitable for this purpose. Include a means of protecting the battery against failure of the charging voltage and explain the action of the device. Calculate the value of the resistance in your circuit if the initial charging current, when the battery is in a discharged condition, is to be 8 amperes. What will be the charging current when the battery has reached a fully-charged condition? Assume that the internal resistance of the cells is negligible.

- 2.* Explain how the anode current of a triode valve is controlled by the potential of the grid with respect to the cathode. Define the terms Amplification Factor, Mutual Conductance and A.C. Resistance.
3. Sketch and describe the construction and action of a power transformer. Enumerate the principal losses which occur and say how they are minimised in practice.
4. What factors determine the capacity of a capacitor? Two capacitors of 10 microfarads and 20 microfarads are connected in parallel across a 400 volts D.C. supply. Calculate the energy stored in the combination.
5. A sinusoidal voltage of 165 volts R.M.S. at 50 c.p.s. is applied to a series circuit having 50 ohms resistance, 1 Henry inductance and 20 microfarads capacitance.

Draw a vector diagram to illustrate the phase relationship between the current and the applied voltage.

What is (a) the phase angle, (b) the R.M.S. value of the current and (c) the peak value of the current?

6. Describe the construction of a gas-filled stabiliser valve and explain how it can be used to stabilise H.T. supplies in a transmitter.
7. Describe the principles of operation of a simple alternator and, with the aid of sketches, show that the output waveform is sinusoidal.
8. With the aid of a diagram showing bias voltages describe the action of a p-n-p junction transistor. What factors determine the collector current?

Examination for the Postmaster General's Second Class Certificate of Competence in Radiotelegraphy

Radiocommunication

Three hours are allowed for this paper. Questions marked with an asterisk must be attempted. Six questions should be answered in all.

- 1.* With the aid of a diagram explain the action of the selector of an automatic alarm device when a correctly timed automatic alarm signal is received.
- 2* Give an account of the operations involved in calibrating a ship's direction-finding system. What is meant by quadrantal error and what practical methods are used to minimise this error?
3. Describe with the aid of a block diagram a superheterodyne receiver used as a marine main receiver. Sketch the selectivity curves when the receiver is properly adjusted for
 - (a) radiotelephony
 - (b) C. W. telegraphy.

Explain the difference between the curves.

4. In ship-shore radiocommunication what use is made of frequencies of the order of
 - (a) 16 kc/s, (b) 1.6 Mc/s, (c) 16 Mc/s, and (d) 160 Mc/s?

State briefly the factors which determine the range in each case.

5. Upon what factors does the efficiency of an aerial depend? Describe a ship's main aerial and explain the maintenance necessary to ensure its efficiency as a radiator.

6. With the aid of a circuit diagram explain how the final (or power) amplifier stage of a transmitter is tuned to a wide range of frequencies and coupled to an aerial.
7. With a simplified circuit diagram explain the principles of operation of an automatic keying device. Describe the facilities provided by this equipment.
8. Explain the action of a starting device for an electric motor used with a machine for supplying power to a marine radio transmitter.

Examination for the Postmaster General's First Class Certificate of Competence in Radiotelegraphy

Radiocommunication

Three hours are allowed for this paper. Questions marked with an asterisk must be attempted. Six questions should be answered in all.

- 1.* With the aid of a circuit diagram explain the action of the selector of an automatic alarm device when receiving a correctly timed auto alarm signal. What errors in the timing of the alarm signal would be tolerated before the device failed to operate?
- 2.* Describe fully what is meant by the term "Resonance" in an A.C. circuit.

Calculate the resonant frequency of a series circuit containing inductance of 2 millihenries and capacitance of 2 microfarads. How would your answer be affected if resistance was included in series with the inductance and capacitance?

3. (a) Draw a block diagram of a superheterodyne receiver used on a ship. Indicate the various controls and write brief notes on the function of each stage.
(b) Show by diagrams the frequency and waveform of the signal voltages being handled at each stage when a signal, consisting of a 500 kc/s carrier modulated at 1000 c/s is being received on a superheterodyne receiver whose intermediate frequency is 100 kc/s.
4. Explain how high-frequency and very-high-frequency radio signals are propagated. Compare the use of frequencies in the range 3 to 30 Mc/s with frequencies in the range 100 to 200 Mc/s for ship-shore radiocommunication.

5. What is meant by the polar diagram of an aerial? Describe the polar diagram of a simple loop aerial and explain how it can be made to take the form known as cardioid. What use is made of this arrangement in a marine direction-finder?
6. Draw a diagram of the audio detector and automatic gain control (AGC) stage of a superheterodyne receiver.

Explain the action of the AGC circuit and indicate by a sketch the relationship between the RF input to the receiver and the AF output. What is the advantage of AGC?

7. Explain how the brightness and movement of the spot in an electrostatic cathode ray tube is controlled.

Give a diagram showing how the control voltages are applied to the various electrodes.

8. What is the cause of parasitic oscillations in a power amplifier? How would the presence of such oscillations be recognised and how would they be suppressed?

Examination for the Postmaster General's First Class, Second Class and Special Certificates of Competence in Radiotelegraphy

Regulations and Procedures

Thirty minutes are allowed for this paper. All questions should be answered.

1. Give examples of call signs of (a) a ship, (b) an aircraft, (c) an amateur station and (d) a ship's lifeboat. How is the nationality of a station indicated?

2. Write out the international phonetic equivalents, as used in radiotelephony procedure, for the letters A to J.

3. Under what conditions is a ship permitted to continue normal working whilst distress procedure is in progress?

4. What are the meanings of the following abbreviations?

ETA	SYS	RQ	CFM	BN
QRK?	QSD	QR	QTO?	QSW.

5. Give an example of the form of TR you would use when your ship is changing watch from one area station to another.

To which station would you send the TR and how much notice should be given ?

6. Give an example of a service message advising non-delivery of a radiotelegram.

7. What are the medium frequency bands in which coast and ship stations are authorised to work?

State the purposes for which the frequencies of 2182 and 500 kc/s may be used.

8. When and to whom would you transmit information concerning floating wreckage? What signals would you use?

4. Radiotelephony Certificates

Restricted Certificate

1. The Restricted Certificate states that the holder has been examined in radiotelephony and has passed in:

- (a) Practical knowledge of the adjustment of radiotelephone apparatus.
- (b) Practical knowledge of radiotelephone operation and procedure.
- (c) Sending and receiving spoken messages correctly by telephone.
- (d) General knowledge of the regulations applying to radiotelephone communications and particularly of that part of those regulations relating to the safety of life.

2. The examination consists of practical and oral tests. Candidates are required:

- (a) To operate a radiotelephone installation, including changing frequency, varying the power of the transmitter and charging batteries.
- (b) To possess a knowledge of radiotelephone procedure in general and the distress regulations in particular.
- (c) To maintain a radiotelephone log.
- (d) To send and receive messages by telephone.

General Certificate

3. The General Certificate states that the holder has been examined in radiotelephony and has passed in:

- (a) Knowledge of the elementary principles of radiotelephony.
- (b) Detailed knowledge of the practical operation and adjustment of radiotelephone apparatus.
- (c) Sending and receiving spoken messages correctly by telephone.
- (d) Detailed knowledge of the regulations applying to radiotelephone communications and particularly of that part of those regulations relating to the safety of life.

4. The examination consists of practical and oral tests. Candidates are required:

- (a) To have an elementary theoretical knowledge of radiotelephone transmitters and receivers including the operation and application of microphones, headphones, loudspeakers, modulators, oscillators, detectors and amplifiers.
- (b) To operate a radiotelephone installation, including changing frequency and varying the power of the transmitter.
- (c) To carry out simple maintenance on the equipment; battery maintenance; tracing and clearing of simple valve and fuse faults.
- (d) To possess a detailed knowledge of radiotelephone procedure and distress regulations.
- (e) To keep a radiotelephone log.
- (f) To send and receive messages by telephone.

APPENDIX 5

**Form of Radiocommunication Log-Book
Log-Book of Ships Required by Intewrnational Agreement or by the
Merchant Shipping (Radio) Rules, 1952. To be fitted with Radio-
communication Apparatus**

RADIOTELEGRAPH LOG

PART I

Name of Ship	Official Number and International Call Sign	Port of Registry	Gross Tonnage

Name of Company operating the Radio Service

Port at which and date when voyage commenced	Nature of the voyage or employment	Port at which and date when voyage terminated
Date:		Date:
Port:		Port:

Delivered to the Superintendent of the Mercantile Marine Office at the Port of .
..... on the day of 19.....

together with Radiotelegraph Log Part II, serial numbers to

Countersigned Master
..... Superintendent Address

SECTION A—PARTICULARS OF RADIO STAFF

Name	Home Address	Certificate Number and Class

SECTION B—PARTICULARS OF BATTERIES ON BOARD

Battery Number	Number of Cells	Type	Date supplied	Voltage and Ampere-hour Capacity	Purpose for which used

SECTION C—DAILY EXAMINATION OF BATTERIES

Date	Battery Number	Voltage off Load	Voltage on Load	Remarks

SECTION D—MONTHLY REPORT OF BATTERIES

Date	Battery Number Cell by Cell	Spedific Gravity as measured		Remarks	Date	Battery Number Cell by Cell	Spedific Gravity as measured		Remarks
		Before Charge	After Charge				Before Charge	After Charge	

RADIOTELEGRAPH LOG

PART II

Name of Ship	Official Number and International Call Sign	Port of Registry	Gross Tonnage

Serial Number from to

Name of Company operating the Radio Service

S.S.
M.V.

DIARY OF THE RADIOTELEGRAPH SERVICE

Date and Time (G.M.T.)	Station From	Station To	Full Details of Calls, Signals and Distress Working	Frequency

RADIOTELEPHONE LOG

Name of Ship	Official Number	Port of Registry	Gross Tonnage

Name of Company operating the Radio Service

Period covered by Log—From To
.....

Delivered to the Superintendent of the Mercantile Marine Office at the Port of
..... on the day of
..... 19.....

together with Radiotelegraph Log Part II, serial numbers to
.....

Countersigned Master
..... Superintendent Address

SECTION A—PARTICULARS OF RADIOTELEPHONE OPERATORS

Name	Home Address	Certificate Number and Class

S.S.
M.V.

SECTION B—DIARY OF THE RADIOTELEPHONE SERVICE

Date and Time (G.M.T.)	Station From	Station To	Frequency used	Record of Working

APPENDIX 6**Specimen of Ship Station Licence**

**United Kingdom of Great Britain and Northern Ireland; The
Channel
Islands and the Isle of Man
WIRELESS TELEGRAPH ACT, 1949**

SHIP LICENCE

PARTICULARS OF SHIP STATION

Name Call Sign Public Correspondence
Category

THE FIRST SCHEDULE - SHIP STATION		
Classes of Emission	Frequencies (Kilocycles per second)	Mean Radio Frequency Power (in the unmodulated condition)
	(Megacycles per second)	
THE FIRST SCHEDULE - LIFEBOAT STATIONS		
Classes of Emission	Frequencies (Kilocycles)	Mean Radio Frequency Power (in the unmodulated condition)
THE THIRD SCHEDULE - RADAR STATION		
Frequency Band (Megacycles per second)		

(The text reproduced above is that of the standard licence current on 1st January 1961.)

App. 6]

(specimen licence continued)

Date of issue Fee on issue

Renewal fee due on or before and on or before every anniversary of that date.

1 (1)

of

(hereinafter called "the Licensee")

is hereby licensed, subject to the terms, provisions and limitations herein contained:—

- (a) to establish a sending and receiving station for wireless telegraphy* (herein-after called "the Ship Station"), in the ship named above (hereinafter called "the ship"); and
- (b) to use the Ship Station for the purpose of
 - (i) sending by wireless telegraphy* messages to coast stations, ship stations and aircraft stations;
 - (ii) receiving by wireless telegraphy* messages sent from coast stations, ship stations, aircraft stations, special service stations and radionavigation stations, for general reception by ship stations or for reception by the Ship Station, and messages (including programmes but not including visual images sent by television) sent by authorized broadcasting stations;
 - (iii) in emergency involving danger to life or to navigation only, sending and receiving messages to and from any other station for wireless telegraphy with which it is desirable that the ship should communicate.

(2) The foregoing licence to use the Ship Station is subject to the following limitations:—

- (a) When using for sending, the Ship Station shall be used only with emissions which are of the classes specified in the First Schedule hereto, and are on the frequencies specified in the First Schedule hereto in relation to those respective classes of emission, and with a power not exceeding that specified in the First Schedule hereto in relation to the class of emission and frequency in use at the time.
- (b) Except in the case of distress, in emergency involving danger to life or to navigation, or for purposes of safe navigation:
 - (i) no message shall be sent to a ship station for onward transmission to any other station for wireless telegraphy, except a coast station, another ship station, or an aircraft station; and
 - (ii) while the ship is within, or within one mile of, any port, harbour, or dock, or any anchorage in the territorial waters of any country, the Ship Station shall not be used for sending or receiving messages directly to or from any ship station except when communicating in the Port Operation Service (V.H.F.) on the appropriate frequencies in the band 156.025 to 162.025 Mc/s.
- (c) No message which is grossly offensive or of an indecent or obscene character shall be sent.
- (d) Except when used for receiving messages from radio-navigation stations or authorized broadcasting stations, the Ship Station shall be operated only

* See note (g)

(The text reproduced above is that of the standard licence current on 1st January 1961.)

(specimen licence continued)

by persons authorized by the Licensee in that behalf and possessing the written authority of the Postmaster-General to fill the position of operator of a ship's station for wireless telegraphy of the type of the Ship Station.

2. (1) The Licensee is also licensed, subject to the terms, provisions and limitations herein contained:—

- (a) to establish sending and receiving stations for wireless telegraphy (hereinafter called "the Lifeboat Stations", which expression shall include any portable wireless telegraphy apparatus used in a lifeboat or other survival-craft) in the lifeboats and other survival-craft associated with, and normally carried by the ship, and
- (b) to use the Lifeboat Stations in an emergency involving danger to life or to navigation only for sending and receiving by wireless telegraphy such messages as the circumstances may require, and at other times for testing the working of the apparatus comprised in such stations on or in the vicinity of the ship.

(2) The foregoing Licence to use the Lifeboat Stations is subject to the following limitations:—

- (a) When used for sending, the Lifeboat Stations shall be used only with emissions which are of the classes specified in the Second Schedule hereto, and are on the frequencies specified in the Second Schedule hereto in relation to those respective classes of emission, and with a power not exceeding that specified in the Second Schedule hereto in relation to the class of emission and frequency in use at the time.
- (b) The Lifeboat Stations shall be operated only by such persons as are referred to in Clause 1 (2) (d) hereof: Provided that nothing in these limitations shall prevent the use or operation of the Lifeboat Stations in distress in whatever manner and by whatever persons may be necessary for the purpose of attracting attention, making known their position and obtaining help.

3. The Licensee is also licensed, subject to the terms, provisions and limitations herein contained:—

- (a) to establish a ship's radar sensing and receiving station for wireless telegraphy (hereinafter called "the Radar Station") in the ship, and
- (b) to use the Radar Station for sending and receiving signals (not being messages having a verbal significance) within the frequency band specified in the Third Schedule hereto, for the purposes of the determination of position, bearing or distance, or for the gaining of information as to the presence, absence, position or motion of any object or of any objects of any class.

4. (1) The Licensee, and all persons operating the stations which the Licensee is authorized by this Licence to establish and use (hereinafter called "the said Stations"), shall observe and comply with the relevant provisions of the Telecommunication Convention.

(2) The apparatus comprised in the said Stations shall be so designed, constructed, maintained and used that the use of the said Stations does not cause any avoidable interference with any wireless telegraphy*.

- (3)(a) Any apparatus comprised in the Ship Station or in the Lifeboat Stations shall at all times be so adjusted that it shall only be possible to transmit with such apparatus on a frequency specified in the First Schedule.
- (b) Any such apparatus (other than direction-finders and auto-alarms) installed on or after the 1st day of November, 1955* shall at all times comply with such of the Performance Specifications which at the date of installation of the apparatus shall have been most recently published by Her Majesty's

* See note (m)

(The text reproduced above is that of the standard licence current on 1st January 1961.)

(specimen licence continued)

Stationery Office on behalf of the Postmaster-General as are applicable to such Stations, subject however to such modifications of the said specifications in favour of the Licensee as the Postmaster-General may from time to time permit: Provided that where any such Performance Specification is declared by notice addressed to all holders of Ship Licences published in the London, Edinburgh and Belfast Gazettes to be one which will come into operation on a specified date after publication by Her Majesty's Stationery Office, nothing in this paragraph shall require such apparatus to comply therewith before the said date.

(4) The said apparatus, and in particular the headgear receivers and microphones thereof, shall be kept in a clean and sanitary condition, and dangerous parts of the said apparatus shall be so screened or isolated as to ensure the reasonable comfort and health of the persons operating the said Stations.

(5) This Licence, any notices of variation served on the Licensee in writing by virtue of the provisions of Clause 7 (3) of this Licence, the latest edition of the Postmaster-General's Handbook for Wireless Operators, published at the date hereof, the documents listed in that edition of the said Handbook as required to be carried on board a ship of the category to which the ship belongs, and a copy of all Notices to Ship Wireless Stations current for the time being, shall be carried on board the ship in the wireless room, and a copy of Section 11 of the Post Office (Protection) Act, 1884, as amended, shall be exhibited in the wireless room. The Licence shall be available for inspection, when required, by any person acting in the course of his duty on behalf of the Postmaster-General or the Minister of Transport and Civil Aviation and by competent authorities of the countries where the ship calls.

(6) The call sign of the Ship Station referred to above shall be used whenever it is necessary to identify the Ship Station. Such call sign followed by two digits (other than 0 or 1 shall be used to identify any of the Lifeboat Stations. A different combination of digits shall be used in respect of each Lifeboat Station.

(7) The Licensee shall not permit or suffer any unauthorized person to operate the said Stations or to have access to the apparatus comprised therein: Provided that the Licensee shall permit any person, acting in the course of his duty on behalf of the Postmaster-General or the Minister of Transport and Civil Aviation to have access to the said Stations at all reasonable times for the purpose of inspecting and testing the apparatus comprised therein. The Licensee shall ensure that persons operating the said Stations observe the terms, provisions and limitations of this Licence at all times.

(8) The said Station shall be closed down at any time on the demand of the Post Office.

5. The Licensee shall render to the Postmaster-General such accounts as the Postmaster-General shall direct in respect of all charges due or payable under the Telecommunication Convention in respect of messages exchanged between the Ship Station and any other stations, and shall pay to the Postmaster-General at such times and in such a manner as the Postmaster-General shall direct, all sums which shall be due from the Licensee for such messages. A certified statement of any such sums signed on behalf of the Postmaster-General by an officer of the Post Office authorized in that behalf by or under section 83 of the Post Office Act, 1953, shall for all purposes (including the purpose of any proceedings by or against the Crown) be sufficient evidence, unless the contrary is proved, of the facts stated therein.

6. (1) All members of the crew of and passengers in the ship for the time being are hereby licensed to install apparatus for receiving wireless telegraphy in the ship and to use the said apparatus for the purpose of receiving messages (including programmes but not including visual images sent by television) sent by authorized broadcasting stations for general reception, and messages from licensed amateur stations.

(The text reproduced above is that of the standard licence current on 1st January 1961.)

(specimen licence continued)

(2) The said apparatus shall be so maintained and used that it does not cause interference with any wireless telegraphy.

(3) The said apparatus shall be open to inspection at all reasonable times by a person acting under the authority of the Secretary of State and shall cease to be used at any time on the demand of any such person.

7. (1) Subject as hereinafter provided, this Licence shall continue in force from year to year until revoked by the Secretary of State.

(2) The Licensee shall pay to the Secretary of State on the issue of this Licence the sum prescribed by or under regulations for the time being in force under section 2(1) of the Wireless Telegraphy Act, 1949 and in advance in each year on or before the anniversary of the date of issue the renewal fee prescribed by or under the said regulations.

(3) The Secretary of State may at any time after the date of issue revoke this Licence or vary the terms, provisions or limitations thereof by a notice in writing served on the Licensee, or by a general notice published in the London, Edinburgh

(specimen licence continued)

and Belfast Gazettes addressed to all holders of Ship Licences. Any notice given under this clause may take effect either forthwith or on such subsequent date as may be specified in the notice.

8. This Licence is not transferable.

9. This Licence shall be returned to the Secretary of State when it has been revoked.

10. Any Licence, however described, which the Secretary of State has previously granted to the Licensee in respect of the said Stations is hereby revoked.

11. Nothing in this Licence shall be deemed to waive any requirement imposed on the Licensee by or under any Act of Parliament.

12. In this Licence, (a) the expression "the Telecommunication Convention" means the International Telecommunication Convention signed at Malaga-Torremolino on the 25th day of October 1973, and the Radio Regulations and Additional Radio Regulations in force thereunder and includes any Convention and Regulations which may from time to time be in force in substitution for or in amendment of the said Convention or the said Regulations; the expression "Port Operation Service" means a service for communicating between coast stations operated by a Harbour Board or similar authority and ship stations, or between ship stations, in which messages are restricted to those related to the movement and the safety of ships, and in emergency, to the safety of persons; and, except where the context otherwise requires, other words and expressions have the same meaning as they have in the Wireless Telegraphy Act, 1949, or in the regulations made under Part 1 thereof; (b) the expression "the Secretary of State" shall mean the Secretary of State for the Home Department.

On behalf of the Her Majesty's Postmaster-General

(An officer of the Post Office authorized in that
behalf by or under section 83 of the Post Office Act, 1953)

(The text reproduced above is that of the standard licence current on 1st January 1961.)

(specimen licence continued)

NOTES

- (a) The Secretary of State should be notified promptly of any change in the address of the Licensee, or of any change in the stations comprised in this Licence. Except as provided below, correspondence about this Licence should be sent to the Postmaster General, Radio Regulatory Division, Waterloo Bridge House, Waterloo Road, London, SE1 8UA.
- (b) Remittances and correspondence about payments to the Secretary of State required under this Licence should be sent to the Accounting Officer, Home Office, Waterloo Bridge House, Waterloo Road, London, SE1 8UA.
- (c) Details of requirements as to operators' qualifications, the precise frequencies to be used for communicating with coast stations or other ship stations or aircraft stations, the inspection of the wireless apparatus comprised in the stations, etc., are contained in the Post Office Handbook for Radio Operators and in "Notices to Ship Wireless Stations" issued by the Post Office.
- (d) This Licence does not authorize the doing of any act which is an infringement of any copyright which may exist in the matter sent or received.
- (e) This Licence does not authorize the transmission of music.
- (f) The sending and receipt (except in emergency) of messages to and from stations other than those stated in this Licence is prohibited.
- (g) The expression "wireless telegraphy" used in this Licence has the meaning assigned to it in the Wireless Telegraphy Act, 1949, and includes, inter alia, radiotelephony.
- (h) Under section 1 of the Wireless Telegraphy Act, 1949, it is an offence to use any station or apparatus for wireless telegraphy otherwise than under and in accordance with a licence granted by the Minister. Breach of this provision may result in this Licence being revoked and the offender prosecuted.
- (j) If any message, the receipt of which is not authorized by this Licence, is received by means of the said Stations, neither the Licensee nor any person using the said Stations should make known the contents of any such message, its origin or destination, its existence or the fact of its receipt, to any person except a duly authorized officer of Her Majesty's Government or a competent legal tribunal, and should not retain any copy or make any use of such message, or allow it to be reproduced in writing, copied, or made use of. It is an offence under section 5 of the Wireless Telegraphy Act, 1949, deliberately to receive messages the receipt of which is unauthorized or (except in the special circumstances mentioned in that section of the Act) to disclose any information as to the contents, sender or addressee of any such message.
- (k)
- (l) It is an offence under section 5 of the Wireless Telegraphy Act, 1949, to send false distress signals and certain other misleading messages.
- (m) It is an offence under section 11 of the Post Office (Protection) Act, 1884, if any person, being in the employment of a telegraph company as defined by the section, improperly divulges to any person the purport of any telegram.
- (n) Apparatus in the Ship Station of the Lifeboat Stations installed before the 1st November, 1955, is not at present required (under the terms of this Licence) to comply with the Performance Specifications. If it is to be required to comply with them in the future, the terms of the Licence will be varied under Clause 7 (3). However, any requirements made by or under the Merchant Shipping (Safety Convention) Act, 1949, or any other of the Merchant Shipping Acts from time to time in force must be complied with in addition to the conditions of this Licence.

(The text reproduced above is that of the standard licence current on 1st January 1961.)

APPENDIX 7

Documents to be Carried by Ship Stations

Ship stations must carry documents as follows:

(1) **Ship Stations for which a Radiotelegraph Installation is required by International Agreement**

DOCUMENT	TO BE OBTAINED FROM:
(a) The Ship Licence	The Inspector of Wireless Telegraphy, General Post Office, Union House, .St. Martin's-le-Grand, London, E.C.1
(b) Copy of Section 11 of the Post Office (Protection) Act, 1884.	
(c) The certificate(s) of the operators).	
(d) The Radiotelegraph Log.	Mercantile Marine Offices.
(e) Alphabetical List of Call Signs of Stations used in the Maritime Mobile Service.	The Secretary General, International Telecommunication Union, Geneva, Switzerland, or from any stationer with a foreign currency allowance.
(f) List of Coast Stations.	
(g) List of Ship Stations.	
(h) List of Radiodetermination and Special Service Stations.	
(i) The Radio Regulations and Additional Radio Regulations, also such provisions of the International Telecommunication Convention as relate to the radiocommunication service on board ship..	
(j) Telegraph tariffs of the countries for which the station most frequently accepts radiotelegrams.	The marine radio company or other authority operating the station.
(k) The Post Office Handbook for Radio Operators.	H.M. Stationery Office, either direct or through any book-seller.

- (1) Complete file of current Notices to Ship Wireless Stations The marine radio company or other authority operating the station, Mercantile Marine offices, Customs Houses or the Inspector of Wireless Telegraphy, General Post Office, Union House, .St. Martin's-le-Grand, London, E.C.1, free of charge.
- (2) **Other Radiotelegraph Stations on board Ship.**
Documents (a) to (g) and (i) to (1) of Section (1).
- (3) **For Stations on board Ships for which a Radiotelephone installation is Required by International Agreement.**
- (a) The Ship Licence.
 - (b) Copy of Section 1 1 of the Post Office (Protection) Act, 1884.
 - (c) The certificate(s) of the operator(s).
 - (d) The Radiotelephone Log.
 - (e) A list of coast stations with which communications are likely to be conducted, showing watchkeeping hours, frequencies and charges.
 - (f) The provisions or the Radio Regulations and Additional Radio Regulations applicable to the maritime mobile radiotelephone service or the Manual for Use by the Maritime Mobile Service.
 - (g) The Post Office Handbook for Radio Operators.
 - (h) Complete file of current Notices to Ship Wireless Stations.
- (4) **Other Radiotelephone Stations on board Ship.**
Documents (a) to (e), (g) and (h) of Section (3).
- (5) **For Ships Equipped with "Multiple" Installations.**
- (a) For each installation, if necessary, the documents mentioned in (a) to (d) of Section (1)' or (a) to (d) of Section (3).
 - (b) For any one of the installations, the other documents mentioned in Sections (1) or (3) as appropriate.
- In addition** all ships should have available an adequate supply of the following forms:
- (a) For radiotelegrams sent from the ship station.
 - (b) For radiotelegrams received by the ship station.
 - (c) For service messages sent or received by the ship station.
 - (d) Reply Paid vouchers.

APPENDIX 8

Radio Direction-Finding Procedures

The following rules of procedure applicable to radiotelegraphy and radiotelephony, are based on the use of radiotelegraphy. When used for radiotelephony, appropriate phrases may replace the service abbreviations if desired.

1.

TO OBTAIN A BEARING

(1) The ship station calls the radio direction-finding station or the radio direction-finding control station on the listening frequency indicated in the List of Radiodetermination and Special Service Stations. Depending on the type of information desired, the calling station transmits the appropriate service abbreviation followed, if the radio direction-finding station is a mobile station, by the service abbreviation QTH ? It indicates, if necessary, the frequency on which it is going to transmit to enable its bearing to be taken, and then awaits instructions.

(2) The radio direction-finding station called requests the calling station, by means of the appropriate service abbreviation, to transmit for the bearing. If necessary, it indicates the frequency to be used for this purpose and the number of times the transmission is to be repeated.

(3) After having changed, if necessary, to its new transmitting frequency, the calling station transmits two dashes of approximately ten seconds each, followed by its call sign. It repeats this signal as often as the radio direction-finding station requires.

(4) The radio direction-finding station determines the direction and, if possible, the sense of the bearing, and its classification (see 2.).

(5) If the radio direction-finding station is not satisfied with the operation, it will request the calling station to repeat the transmission described in (3).

(6) The radio direction-finding station then transmits the information to the calling station in the following order:

(a) the appropriate service abbreviation;

- (b) three digits indicating the true bearing in degrees from the radio direction-finding station;
- (c) class of bearing;
- (d) time of observation;
- (e) if the radio direction-finding station is mobile, its own position in latitude and longitude, preceded by the service abbreviation QTH.

As soon as the calling station has received the result of the observation, it repeats the message, if this is considered necessary to obtain confirmation. The radio direction-finding station then confirms that the repetition is correct or, if necessary, corrects it by repeating the message. When the radio direction-finding station is sure that the calling station has received the message correctly, it transmits the signal "end of work". The calling station repeats this signal to indicate that the operation is finished.

In the absence of information to the contrary, the calling station may assume that the sense of the bearing was determined. If the radio direction-finding station has not determined the sense, it indicates this in the information transmitted, or reports the bearing and its reciprocal.

2. CLASSIFICATION OF BEARINGS ON FREQUENCIES BELOW
3000 KC/S

To estimate the accuracy and determine the corresponding class of a bearing:

- (a) an operator should generally, and particularly in the maritime mobile radio direction-finding service, use the observation characteristics of bearings shown in the following Table;
- (b) the operators at a radio direction-finding station, when facilities and time permit, may take into account the probability of error in the bearing. A bearing is considered as belonging to a particular class if there is a probability of less than one in twenty that the bearing error would exceed the numerical values specified for that class in the Table. This probability should be determined from an analysis of the five components that make up the total variance of the bearing (instrumental, site, propagation, random-sampling and observation components).

TABLE

Class	Bearing Error (Degrees)	Observational Characteristics					
		Signal Strength	Bearing Indication	Fading	Interference	Bearing Swing (Degrees)	Duration of Observation
A	± 2	very good or good	definite (sharp null)	negligible	negligible	less than 3	adequate
B	± 5	fairly good	blurred	slight	slight	more than 3 less than 5	short
C	± 10	weak	severely blurred	severe	severe	more than 5 less than 10	very short
D	more than ± 10	scarcely perceptible	ill-defined	very strong	very strong	more than 10	inadequate

3. TO OBTAIN A POSITION DETERMINED BY TWO OR MORE RADIO DIRECTION-FINDING STATIONS ORGANISED AS A GROUP

(1) If the calling station wishes to be informed of its position by a group of radio direction-finding stations, it calls the control station as indicated in 1. (1) and requests its position by means of the appropriate service abbreviation.

(2) The control station replies to the call and, when the radio direction-finding stations are ready, requests, by means of the appropriate service abbreviation, the calling station to transmit. When the position has been determined, the control station transmits to the calling station:

- the appropriate service abbreviation;
- the position, in latitude and longitude or, if appropriate, in relation to a known geographical position;
- the class of position as denned in the following subparagraph;
- the time of observation.

(3) According to its estimate of the accuracy of the observation, the control station must classify the position in one of the four following classes:

- Class A: positions which the operator may reasonably expect to be accurate to within 5 nautical miles;
- Class B: positions which the operator may reasonably expect to be accurate to within 20 nautical miles;
- Class C: positions which the operator may reasonably expect to be accurate to within 50 nautical miles;
- Class D: positions which the operator may not expect to be accurate to within 50 nautical miles.

4. TO OBTAIN SIMULTANEOUS BEARINGS FROM TWO OR MORE RADIO DIRECTION-FINDING STATIONS ORGANISED AS A GROUP

On a request for bearings, the control station of a group of radio direction-finding stations proceeds as indicated in **3.** above. It then transmits the bearing observed by each station of the group, each bearing being preceded by the call sign of the station which observed it.

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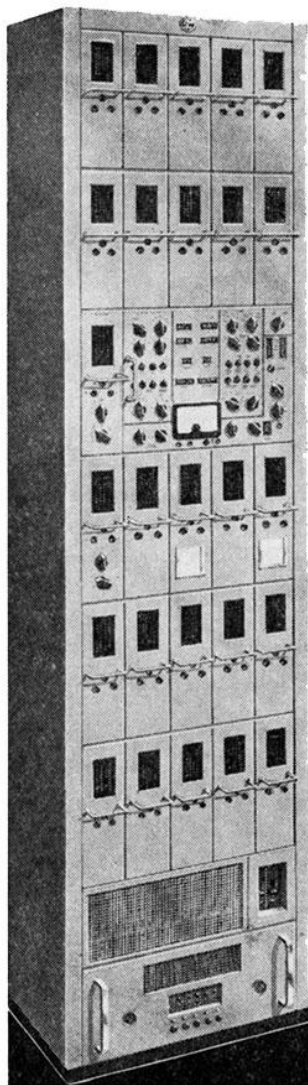
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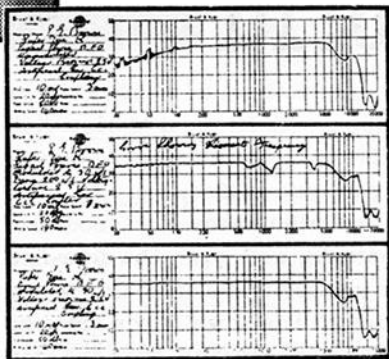
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